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CHINA AND THE TREATIES

THE PEACE OF THE FAR EAST  
By GEORGE BRONSON REA

AN HISTORICAL SURVEY OF  
THE ANTI-JAPANESE BOYCOTT  
MOVEMENTS

CHINA AND THE AMERICAN  
FOREIGN POLICY

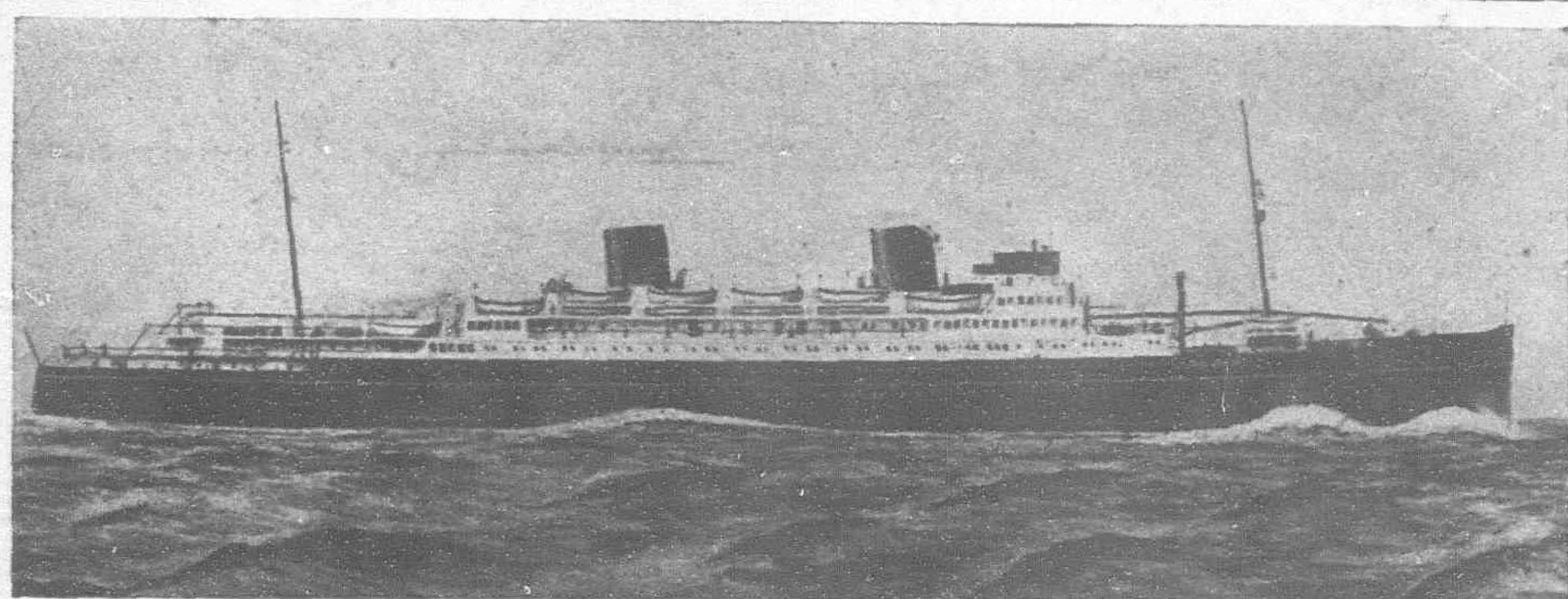
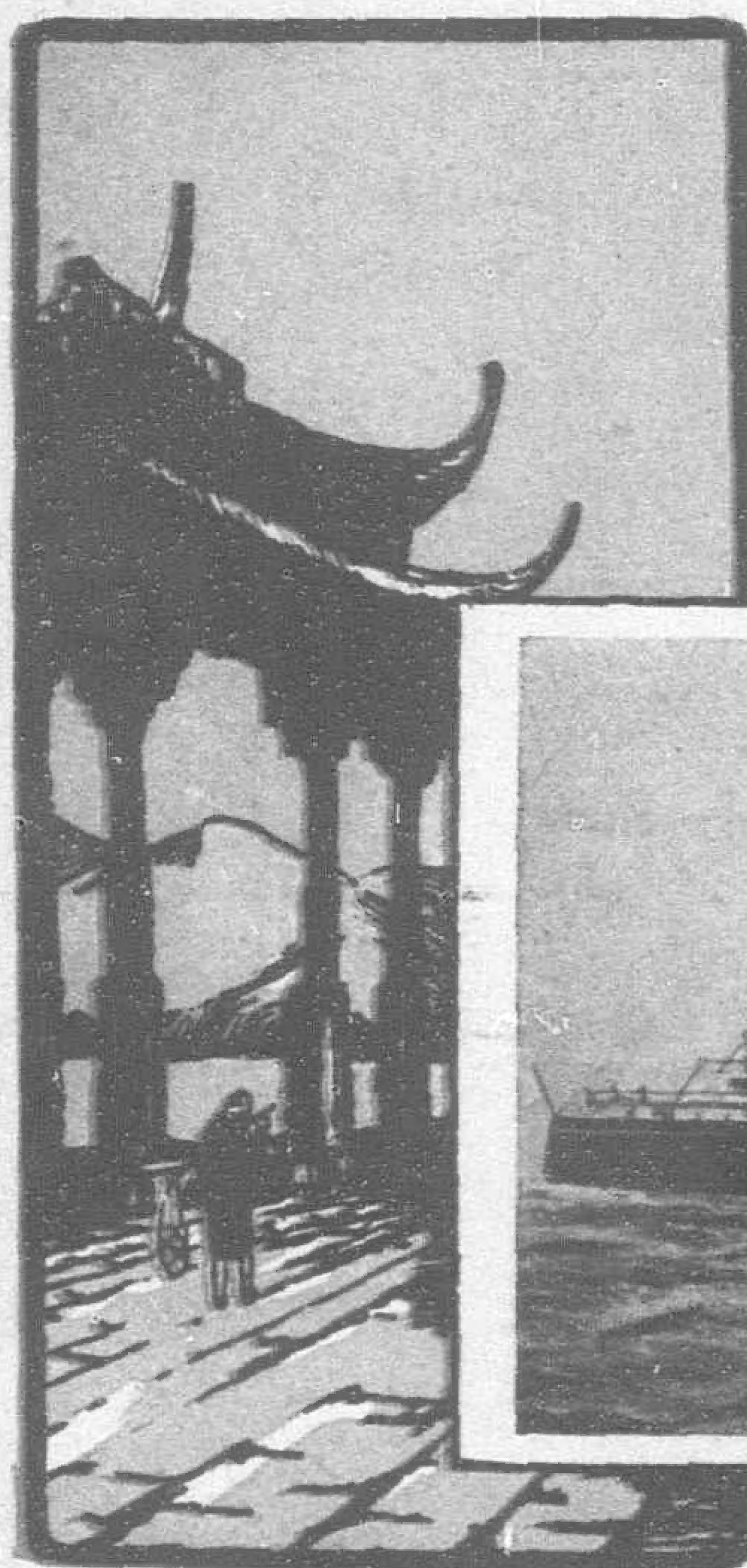
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No. 8



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# The Far Eastern Review

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No. 8

## China and the Treaties

Unilateral Abrogation—Japan's Policy—The Soong-MacMurray Treaty—The British Nanking Settlement

Dr. C. T. Wang's Daring Diplomacy.

It was inevitable that the question of treaty revision in China should become more keenly pressed immediately after the capture of Peking (or Peiping as the Nationalists prefer to call it). There is an undoubtedly powerful mass opinion in China which is opposed to the continuance of the present treaties. This fact has been recognized by all Governments in China and by the Powers. The United States, Great Britain, Japan and other principal Powers have at different times freely expressed their determination to revise the treaties under certain specific conditions. The Washington Conference resulted in the calling of the Tariff Conference in Peking, Dr. C. T. Wang, now Minister of Foreign Affairs of the Nationalist Government, being its chairman. Dr. Wang, at that time, was associated with Marshal Feng Yu-hsiang and when his position in Peking became untenable because of political changes, he retired from the capital and left the Tariff Conference without a Chinese delegation, with the result that nothing came of the Tariff Conference. Similarly, the Washington Conference Powers sent a commission to China to investigate into the possibilities of abolishing extraterritoriality, but owing to the civil wars of the period, the Commission was unable to make complete and adequate investigations. Its findings, based upon data more favorable than that which was unavailable, was specific with regard to China's weaknesses, but offered recommendations for improvements.

Since the meetings of these bodies, China has been in constant civil warfare. There was, first of all, the Communist effort out of Canton direct by the Russian, Michael Borodin; then there followed the Yangtze Valley disturbances culminating in the Nanking outrage; finally followed the Northern Expedition, led generally by General Chiang Kai-shek. In the North took place the additional conflict

between Chang Tso-lin, Feng Yu-hsiang and Yen Shih-shan, while in Shantung and Chihli, the situation was complicated by the depredations of Chang Chung-chang and the intransigence of Sun Chuan-fang. During this period, revision of the treaties was wholly out of the question, because 1) China was not a united country and there was no single authority in the land; 2) outrages were constantly being committed on foreign life and property; 3) none of the principal Powers could compromise with the warfare of Communism. Instead of treaty revision, a modified form of intervention took place, the principal Powers sending military and naval forces to China to protect the lives and property of their nationals.



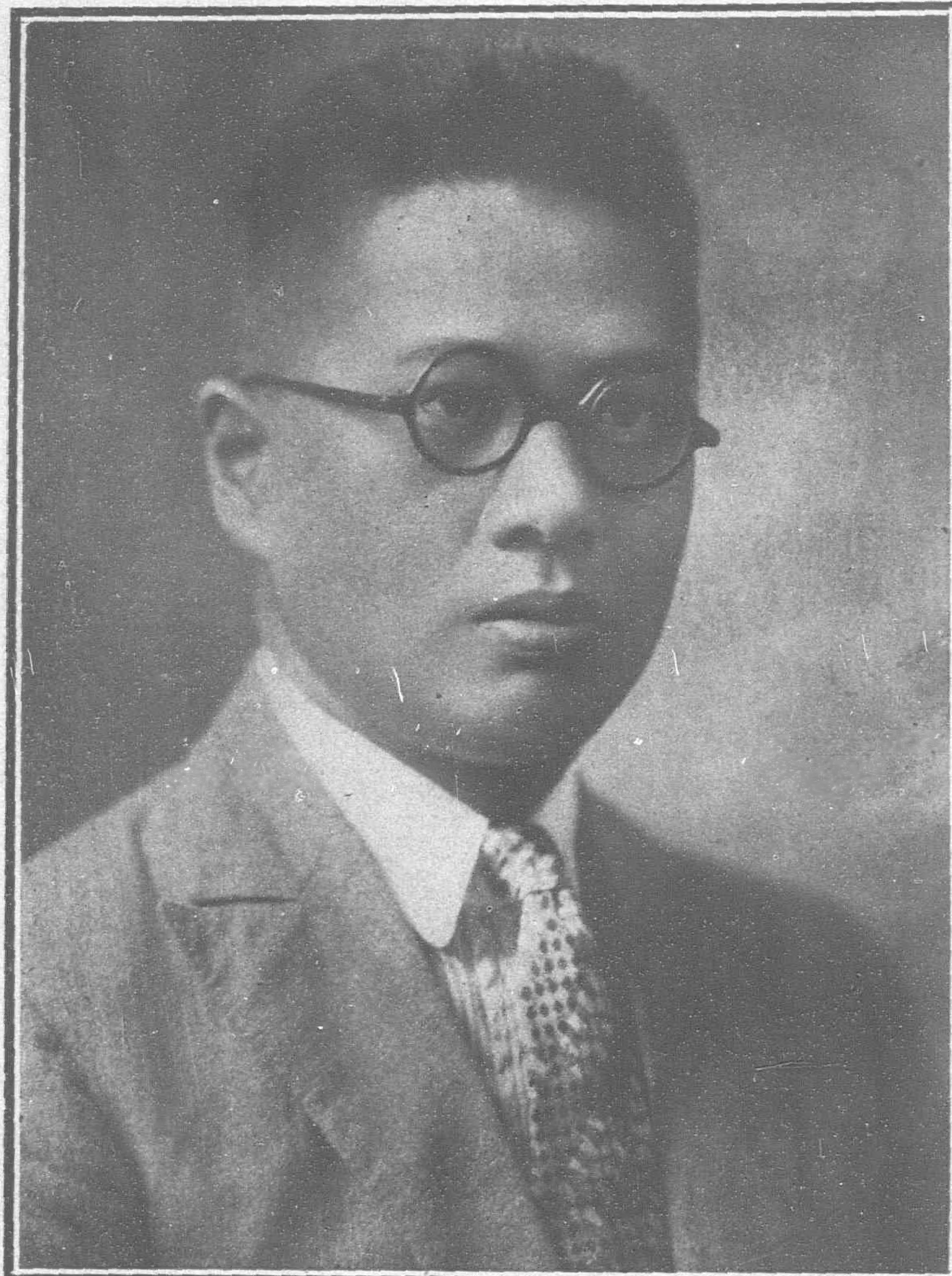
General Chiang Kai-shek, Commander-in-chief of the Nationalist Armies

### A Changing Policy

The foreign policy of China during this period was directed at different times by four Minister of Foreign Affairs. Mr. Eugene Chen was in charge of the Ministry of Foreign Affairs during the Communistic period, when Borodin was practically the dictator of the Nationalist Government. Mr. Chen was bombastic, forceful and brilliant. His task was to make war on Great Britain and he did so with Phillipics which will ever remain classics in Far Eastern diplomacy. Although he won what might be termed a diplomatic victory in the Chen-O'Malley Agreement, which resulted in the retrocession of the British Concessions in Hankow and Kiukiang, he actually brought upon China the very great humiliation of a form of armed intervention. The underlying motif of Mr. Chen's policy was that negotiations are futile and that therefore China must force the Powers to agree to her foreign policy.

Dr. C. C. Wu, who succeeded Mr. Chen, was faced by altogether a different set of circumstances. By the time he came into office, none of the Powers, not even Russia, was on good terms with the





Mr. T. V. Soong, Minister of Finance

Nationalist Government. The Nanking Outrage had resulted in a complete cession of diplomatic intercourse, while the split with the Communists had lost the support of Russia. The Nationalist Government was isolated and despised. He took over all the animosity which had been engendered by Eugene Chen and the exposure of Communistic complicity, amounting almost to dictatorship, had alienated a liberal opinion throughout the world. His task, then was quietly and patiently to rebuild the goodwill without sacrificing the National interests of China. He adopted a negative policy of doing as little as possible, which succeeded admirably, for had he attempted to take any action at all, it would have involved his country in very serious diplomatic difficulties and might have resulted in irreparable losses.

Dr. Wu was succeeded by Mr. Huang Fu, whose career was marked by a tendency to conciliation with Japan and whose principal achievement was the signing of the Huang-MacMurray Notes closing the Nanking Outrage so far as the United States was concerned. Mr. Huang's career was ended by the Tsinan Incident, when such a clash occurred between Chinese and Japanese troops that conciliation between the two nations was, for the moment, difficult, if not impossible, and therefore his particular services were no longer desirable.

He was followed by the present incumbent in office, Dr. C. T. Wang, who is keen and experienced, but somewhat given to the use of dramatic and unexpected methods, which if employed two years ago might have succeeded much better than Mr. Eugene Chen's tactics, but which at this moment, have only resulted in a serious conflict with Japan and a loss of prestige to the Minister of Foreign Affairs in the exchange of correspondence between himself and Mr. MacMurray which will be published below.

### The Revision of Treaties

The conflict with Japan arises over the question of treaty revision which had become increasingly involved as the date arrived when some of the treaties came up for renewal and revision. On

July 4, the *Kuo Ming News Agency* published an interview with Dr. C. T. Wang, in which was stated:

"The Minister of Foreign Affairs announced that both the Sino-Italian and Sino-Danish treaties had expired on June 30, while the treaties with France, America and Great Britain will expire in 1933, 1934 and 1934 respectively. All these treaties, however, are to be revised, and he would commence negotiations as soon as possible.

"As to those countries whose treaties with China have long since expired, such as Belgium, Brazil, Persia and certain South American Republics, Dr. Wang said the Nationalist Government are prepared to conclude new treaties on an equal footing at any time.

"Dr. Wang stated that his meetings with the various foreign Consul-Generals in Shanghai had been cordial and satisfactory."

Previous to this, it had been the policy of the Minister of Foreign Affairs in Peking to adopt an utterly realistic policy with regard to treaty revision. That is, when the Peking Government dealt with small nations whose interest in China were of little importance, they declined to consider renewal and insisted upon complete revision. When, however, the Peking Government dealt with a powerful nation which had it in its power to make war on China or to utilize this question to the detriment of China, they considered renewal on the basis of revision and entered upon informal negotiations with this end in view.\*

The informal negotiations with Japan continued over a very long period and during the whole period, the Japanese Government kept the Ministers of Foreign Affairs of the Nationalist Government informed with regard to these negotiations which had their tacit approval, as neither Mr. Eugene Chen nor Dr. C. C. Wu, nor Mr. Hang Fu ever protested against the negotiations. The Japanese view is effectively expressed in a *Nippon Dempo* dispatch from Peking, dated July 12, which states as follows:

"The Japanese Minister to Peking, Mr. Kenkichi Yoshizawa, speaking about the Nationalist proposal to sign new treaties of commerce with Italy and Denmark and abolition of other treaties, yesterday said that Japan still considers its treaty with China in effect, although it technically

\*Full details of the negotiations with Belgium and with Japan will be found in the *China Year Book* for 1928.



Mr. Huang Fu, Ex-Minister of Foreign Affairs



expired last October. He declares, that no negotiations for its revision had been concluded within six months after that, which left it still in effect and said, further, that no government which replaced another could renounce or undo the acts of its predecessor.

"I believe all the Powers will agree to this view of Japan," he said. "However, Japan will be willing to negotiate with the Nationalist Government for the revision of the present treaty if the latter will approach us through regular channels."

On July 7, the Nationalist Government issued the following statement setting forth their general view of the situation:

"The Nationalist Government, with a view to adapting themselves to the present day circumstances and with the object of promoting the welfare of and the friendly relations between China and different countries, have always considered the abrogation of all the unequal treaties and the conclusion of new treaties on the basis of equality and mutual respect for territorial sovereignty as the most pressing problem at the present time. These aims have been embodied in declarations repeatedly made by the Nationalist Government.

Now that the unification of China is an accomplished fact, it is the task of the Nationalist Government to make every effort fully to realize these aims. While they will continue to afford protection to foreign lives and property in China, according to law, the Nationalist Government hereby make the following specific declaration with regard to all the unequal treaties:

(1) All the unequal treaties between the Republic of China and other countries, which have already expired, shall be *ipso facto* abrogated, and new treaties shall be concluded.

(2) The Nationalist Government will immediately take steps to terminate, in accordance with proper procedure, those unequal treaties which have not yet expired, and conclude new treaties.

(3) In the case of old treaties which

the *modus vivendi* during the interim between the expiration of the old and the conclusion of the new Treaties is as follows:

(1) The Regulations apply only to the countries and the nationals thereof whose Treaties with China have already expired, and with which new Treaties have not yet been concluded.

(2) All diplomatic and Consular officials shall be entitled to proper treatment in accordance with International Law.

(3) The persons and properties of foreigners in China shall receive due protection under Chinese law.

(4) Foreigners shall be subject to the regulations of Chinese law and the jurisdiction of Chinese Law Courts.

(5) Pending the enforcement of the National Tariff schedule, the regular Customs Duties on imports into China from foreign countries or by foreigners, and on exports from China to foreign countries, shall be collected in accordance with the existing Tariff schedule.

(6) All taxes and duties payable by Chinese citizens shall be payable equally by foreigners.

(7) Matters not provided for by the foregoing shall be dealt with in accordance with International Law and Chinese Municipal Law.—*Reuter*.

In the meantime, the Ministry of Foreign Affairs officially notified the French Minister, declaring the abrogation of the Commercial Regulations and Appendix thereto concerning Annam and Indo-Chine in the Sino-French Treaty upon their expiration on July 7. There seemed to have been considerable delay between various announcements of policy and the actual notification to Japan which did not take place until July 20, when Mr. Okamoto, the Japanese Consul-General in Nanking, was notified that the Sino-



Mr. Eugene Chen

have already expired, but which have not yet been replaced by new treaties, the Nationalist Government will promulgate appropriate interim regulations to meet the exigencies of such situation."

On the same date, Dr. C. T. Wang handed Notes to the Italian and Danish representatives calling attention to the expiration of the treaties with China and suggesting that negotiations for fresh treaties on the basis of absolute equality commence. Again, on the same day, the Nationalist Government adopted the draft declaration of the Minister of Foreign Affairs in which he proposed the following:

First, that all expired Treaties are null and void and new Treaties must be negotiated.

Secondly, the Nationalist Government shall propose the immediate revision of unexpired Treaties in accordance with the proper diplomatic procedure.

Thirdly a *modus vivendi* shall be provided during the interim between the expiration of the old and the conclusion of the new Treaties. Fourthly, foreign nationals in China shall enjoy equal rights and treatment as Chinese citizens enjoy.

Fifthly, pending the formulation and promulgation of the National Tariff schedule by the Nationalist Government, the existing schedule shall be enforced.

The latter clause suggests that the Nationalist Government proposes to impose its own tariff without consultation of the Powers, and in contravention of existing treaties.

This declaration affected immediately the Treaties of Japan, Belgium, Portugal, Italy and Denmark. The relations covering



Dr. C. T. Wang



Dr. C. C. Wu

Japanese Commercial Treaty was abrogated, a translation of which follows:—

"With a view to suiting the current situation and to increasing international friendship and happiness, the Nationalist Government of China desires the abolition of all unequal treaties and to replace them with new treaties to be formed on

the basis of equality and assurance of China's sovereignty. This had already been announced on the 7th day of July in a general declaration, and again communicated to Minister Yoshizawa under date of July 12 for transmission to your Government.

"The Sino-Japanese Treaty of 1896, and the explanatory notes on shipping, the appendix of September 13, 1896, and the commercial pact of 1903 expired for the third time on October 8, 1926. Your Government had then been notified immediately to revise the said treaties and explanatory notes with China. The said treaties and appending notes have been in use too long and do not suit present commercial relations between the two countries. These treaties should have been cancelled within six months of their date of expiration before the new treaties were entered into, but for the sake of friendly relations between China and Japan, the period for revision of the Sino-Japanese treaties was extended and the last extended period for revision of treaties again expires on July 20, but new treaties have not yet been made.

"The Nationalist Government of China, therefore, adheres to its declaration of July 7, 1928, to enforce the seven articles of temporary regulations governing commercial relations between China and foreign countries in the interim before new treaties on the basis of equality and mutual benefit are negotiated.

"It is hoped that you will forward this message to Minister Yoshizawa for information of your Government and request it to appoint in the shortest possible period a fully authorized delegate to negotiate with China on the basis of equality and mutual respect of each other's sovereignty and thus improve friendly relations between the two nations."



The Japanese immediately took the view that the Sino-Japanese Commercial Treaty of commerce automatically extends itself until October 1936, unless Japan is willing to enter into negotiations for the revision of the Treaty. This attitude is based upon Article 26 of the Treaty which reads as follows:

"Revision.—It is agreed that either of the High Contracting Parties may demand a revision of the Tariffs and of the Commercial Articles of this Treaty at the end of ten years from the date of the exchange of the ratifications; but if no such demand be made on either side and no such revision be effected, within six months after the end of the first ten years, then the Treaty and Tariff, in their present form, shall remain in force for ten years more, reckoned from the end of the preceding ten years, and so it shall be at the end of each successive ten years."

The Japanese view is that on August 21, 1927, six months after the ten months period had expired, the Treaty automatically extended itself.

### Conflicting Views

The view of the Peking Government always was that China cannot afford altogether to disregard Japan's huge economic interests in China and also because Japan regards Manchuria as her first line of defense against Russia. China in her present weakened condition must take a realistic view of the situation and that a special consideration must be shown to Japan lest Japan be forced by circumstances to fight for the protection of these interests which amount to approximately two billion yen. Altogether there are two hundred thousand Japanese subjects in China and as the Treaties govern the conditions under which they live in this country, it naturally becomes a matter of the greatest importance to Japan to protect them.

The Nationalist view, never openly expressed, but constantly discussed, is that, first, they cannot recognize Japan's position because it would be unpopular with the people and it might lead to a political crisis and, secondly, that should the Nationalist Government recognize Japan's point of view, under the Most Favored Nation Clause in the Treaties of other Powers, a similar attitude would have to be adopted towards each of the other Powers when its treaty came up for revision.

There were numerous curious circumstances attached to this abrogation. Two or three days previous to the 20th, Mr. S. Yada, the Japanese Consul-General in Shanghai, called upon Dr. C. T. Wang in Nanking for the purpose of discussing with him the settlement of the Tsinan Incident. In the course of the protracted conversation on the subject, Mr. Yada left Nanking believing that no forceful steps would be taken until the Tsinan Incident had been settled and he actually had made an appointment to meet Dr. Wang in Shanghai on July 22 for the purpose of further preliminary discussions with regard to the settlement of the Tsinan question. There was, therefore, considerable surprise at the action which was taken on the 20th and to which no reference was made in

discussions which took place a few days before. This, however, is not important except that it gives the impression that up to the last moment there was a difference of opinion in Nanking as to whether the Note should be presented or not and that difference of opinion was considerably emphasized by the fact that the military authorities

of Nanking were faced by the presence of Japanese troops in Shantung and by the prospects of a possible conflict with Japanese troops in Manchuria.

Mr. Yoshizawa, the Japanese Minister in Peking, in discussing this question with a representative of the *Toho News Agency*, explains the Japanese position as follows:—

"The reason for my instructions can be interpreted that the Japanese Government will find it necessary to point out to the Nanking Government the illegal measures it is adopting and the legitimate attitude to be taken by the Japanese Government, with due warning against any renunciation of the Treaty not acquiesced in by Japan.

"The Nanking Government is not as yet recognized by the Powers. Therefore, there is ample room to doubt legally speaking, whether the Nanking Government has the necessary status to conclude treaties with foreign countries, though it may be powerful enough to carry out the task of revising the so-called unilateral treaties."

Turning to the practical effects of the abrogation of the Treaty upon Japanese rights and interests in China, the Japanese Minister said:—

"Commercial transaction between the peoples of both countries are not only numerous both by land and sea, but a great number of Japanese, some 200,000 in all, are engaged in various business in China. Just imagine the difficult position of these Japanese who may be deprived of extraterritorial rights and other privileges by abrogation of the treaty without any negotiations having been completed to revise or renew the treaty by reciprocal measures. We must of course succumb to reason, although we may suffer a heavy loss, but we must fight out the present unreasonable attitude of the Nationalist Government which seeks to rid the Japanese of proper rights duly provided in the treaty.

"We cannot but express regrets at the present attitude of the Nanking Government, which is not only illegal but unfriendly. We cannot enter into negotiations for the conclusion of a new treaty under any misconception that the present Sino-Japanese Commercial Treaty is null and void. The Japanese Government will never cease to resist on this point so long as we cannot feel assured that there will not occur any deplorable affair in consequence of the illegal abrogation of the treaty by the Nanking Government. I am not, however, in a position to declare at present what practical measures may be taken, though I am prepared for the worst."

In an interview with press representatives on July 23, Dr. C. T. Wang explained his view of the situation as follows:—

Dr. Wang declared that the Japanese treaty expired on October 20, 1926, and in accordance with the terms of the treaty the Peking Government served six months' notice on Japan asking for the negotiation of a new treaty, to which Japan agreed.

The Sino-Japanese negotiations were then started, but when it was found they could not be completed within the six months' period stated, China agreed to a further extension of three months, the Minister stated.

"Since that time, the Peking Government has granted five successive



General Chang Hsueh-liang



extensions of three months which brought the negotiations to July 20 of this year," he proceeded. "When the Nationalist troops captured Peking, possession was obtained of all the documents pertaining to the Sino-Japanese treaty conferences, and after these had been studied the Nationalist Government decided officially to notify Japan that no further extension of the old treaty is possible and that a new treaty must be negotiated immediately."

Dr. Wang pointed out that the Nationalist Government was fully aware that Japan would strive to further the continuance of the old treaty, but the Government had decided to stand its ground, believing that the public opinion of the world would support China's desire to achieve a position of treaty equality with other nations.

### The Italian Treaty

Meanwhile, similar steps were taken to abrogate the Sino-Italian treaty, with regard to which a controversy similar to that with Japan developed.

The following document is of interest :—

Monsieur le Ministre.

"I have the honor to acknowledge receipt of Your Excellency's Note of the First of July, 1928.

"In this note Your Excellency, after pointing out that the conditions prevailing at the time of the conclusion of the Sino-Italian Treaty of October 26, 1866, have radically changed, declares that the Nationalist Government consider the said Treaty abolished at once after its expiration on June 30 of this year, and propose that representatives be immediately appointed to draw up a new treaty on a basis of equality and mutual respect for territorial sovereignty.

"I have forwarded Your Excellency's Note to my Government. Meanwhile I have the honor to make the following observations :—

"I contest the right of the Nationalist Government to declare the Treaty abolished and no longer in force from June 30, last. The Chinese Government have indeed the right to ask, within the six months from that date, for the revision of the Tariff and of the Commercial Articles, but they have not the right to declare the Treaty to have expired. This appears evident from the wording of Article XXVI, which reads as follows :—

"It is agreed that either of the High Contracting Parties of this Treaty may demand a further revision of the Tariff and of the Commercial articles of this Treaty at the end of the month of June 1878. But if no demand be made on either side within the six months following the above date, then the Tariff shall remain in force for ten years more from that date ; and so it shall be at the end of each successive ten years."

"I must, therefore, make formal reservation with regard to the rights deriving from the Treaty, which my Government continues to consider valid until it shall be substituted by a new Treaty concluded by mutual consent. If in the meanwhile the Chinese Government should not observe its obligations arising from the Treaty, my Government might feel bound to protect their interests and the interests of their nationals by such means as they may consider opportune.

"The Italian Government, however, being anxious further to strengthen the bonds of friendship between Italy and China, and prompted by the desire to meet as far as possible the aspirations of the Chinese people, are prepared to take into consideration the revision of the existing treaty relations and to open negotiations with that object.

"The Italian Government are prepared to base the new Treaty on the mutual concession of the most favored nation treatment. Therefore, if on the one hand the Italian Government have no objection to open promptly and in a friendly spirit negotiations for the revision of the Treaty as a whole, on the other hand they intend that Italian citizens or companies (in respect to Consular jurisdiction) and Italian import and export trade (in respect to Customs Tariff) should not ever receive a treatment less favorable than that enjoyed in China by the citizens and by the trade of any other country. Therefore, I must declare from this moment that the new instrument should embody a suspending clause to the effect that the stipulations of the Italo-Chinese Treaty about to be concluded will come into force only after all the Powers signatory to the Washington Agreement shall have adjusted on a new foundation the diplomatic instruments which bind them to China.

"Another condition required by my Government for the putting in force of the new Treaty is that our relations with the Chinese Government should have returned to their normal basis. In the name of the Royal Italian Government, I beg to express the wish that the Nationalist Government may soon accomplish its task and thus bring about the conditions mentioned.

"Please accept, Monsieur le Ministre, the assurance of my high consideration.

(Signed) DANIELE VARE."

### The Japanese View

The Japanese note, dated July 19, addressed to the Ministry of Foreign Affairs and fully setting forth the Japanese view point is herewith given :

The Japanese Minister has the honor to acknowledge the receipt of the Note of His Excellency, the Minister for Foreign Affairs of the Nationalist Government, under date of July 19, 1928, informing that the Treaty of Commerce and Navigation of 1896 between Japan and China,

the Notes annexed thereto and the Protocol annexed to the above Treaty as well as the Supplementary Treaty of 1903 and its annexes have expired on July 20 of this year, and accordingly proposing the conclusion of a new Treaty. It is also stated in the said Note that the Nationalist Government have declared to act, pending the conclusion of the new Treaty, in accordance with the "Provisional Regulations for the period after the treaties between the Republic of China and foreign countries have been abrogated and not replaced by new treaties" promulgated by them.

In reply to the Note above-mentioned, the Japanese Minister has the honor to state, under instructions from his Government, as follows :

Article 26 of the Treaty of Commerce and Navigation of 1896 reads :

"It is agreed that either of the High Contracting Parties may demand a revision of the Tariffs and of the Commercial Articles of this Treaty at the end of ten years from the date of the exchange of the ratifications ; but if no such demand be made on either side and no revision be effected, within six months after the end of the first ten years, then the Treaty and Tariffs, in their present form shall remain in force for ten years more, reckoned from the end of the preceding ten years, and so it shall be at the end of each successive period of ten years."

There is no stipulation providing for the abrogation or expiration of the Treaty. It is natural, therefore, that the Treaty can neither be abrogated nor terminated without special mutual consent or agreement between both Contracting Parties. Further, as it is expressly stipulated in the provisions of the same Article that if the negotiations for the revision were not completed within six months, then the Treaty and Tariffs should remain in force ten years more, it admits of no doubt that the Treaty and Tariffs should remain in force for another ten years. The Japanese Government having consistently held the above view made it clearly known to the Waichiaopu of the Peking Government in the Memorandum of the Japanese Government in reply to that Ministry's proposal for the revision of the Treaty of Commerce and Navigation and they have never failed to remind the Chinese Authorities thereof on several subsequent occasions when the term for Treaty negotiation was renewed.

The Treaties and the accompanying documents being, for the above reasons, still in force even after the expiration of the term for treaty negotiation, July 20th last, the Japanese Government deem it impossible to share the view of the Nationalist Government that the expiration of the term for treaty negotiation coincides with the expiration of those Treaties.

Moreover in their Note, the Nationalist Government maintain to rule during the interim period before the conclusion of a new treaty, with the so-called "Provisional Regulations" which have been unilaterally drawn up by them. This will bring into practice the termination of the present Treaties still in force. It is, on the part of the Nationalist Government, not only an infringement of the terms of the Treaty, which is inadmissible in the light of both treaty interpretation and international usages, but also an outrageous act disregarding good faith between the nations in which the Japanese Government find themselves absolutely unable to acquiesce.

As for the revision of the Treaties, however, the Japanese Government, as they have declared on more than one occasion, have sincerity and are in readiness for entering into its negotiation, in view of the national aspirations of the Chinese people and also the close relationship in every respect between the two countries. The above attitude of Japan has been as the Nationalist Government are well aware, clearly evidenced by the fact that in the informal negotiations for Treaty revision held at Peking, the Japanese Government endeavored to facilitate the Treaty revision by consenting several times to the extension of the term for Treaty negotiation even after the expiration of the original six months. In this connection, it must be especially pointed out that the revision was unfortunately not effected during the term chiefly because of political unrest in China.

In short, the attitude of the Japanese Government towards the Treaty revision has in no way been altered. If the Nationalist Government, therefore, having regard to international fidelity as well as neighborly friendship between Japan and China, recognize the validity of the existing Treaties by withdrawing their declaration to enforce the so-called "Provisional Regulations," the Japanese Government are ready gladly to agree to the proposal of the Nationalist Government for Treaty revision and not in the least hesitate to effect such revision as may be considered appropriate. If, however, the Nationalist Government still stick to their attitude to insist on the expiration of the existing Treaties, the Japanese Government can not see their way to open the negotiation for Treaty revision and further, if the Nationalist Government should persistently attempt to enforce the so-called "Provisional Regulations" unilaterally, the Japanese Government declare hereby that they may be obliged to take such measures as they deem suitable for safeguarding their rights and interests assured by the Treaties.

The immediate political effect of the abrogation of the Japanese Treaty was that Japan adopted the view that Japanese interests in Manchuria were imperilled and that Japan would take whatever steps necessary, even interference in the internal affairs of China, to protect her vast interests in Manchuria. To this phase of the subject reference will be made in another place.

### The Soong-MacMurray Treaty

We now turn to the Soong-MacMurray Treaty, which broke the ice with regard to treaty revision on one subject only, namely, that of tariff autonomy. It is interesting in this connection to



recall an interview given by Dr. C. T. Wang to Mr. Drew Pearson, correspondent of the *New York World* in Peking, in 1925, when Dr. Wang was at the head of the Tariff Conference. In this interview Dr. Wang said:—

"At the Paris Peace Conference, my American friends all told me that the United States would stick with us to the end, and see Shantung liberated. The Chinese delegation went over on the same boat with Franklin Roosevelt, the Assistant Secretary of the Navy, and he told us that China had entered the war because America had and that America would see us through. I even remember his raising his champagne glass and drinking to the day when Shantung would be ours again.

"But what happened at Paris? Wilson made a great effort. I give him due credit for that, but at the last minute he fumbled the ball.

"I remember when Willard Straight was Consul at Mukden, and had made all arrangements for a railroad paralleling the South Manchurian. Everything was agreed upon to the last detail, and he was assured the backing of the American Government.

"But when the Japanese and British Governments put their feet down, the American Government backed down. It fumbled the ball. Your diplomacy in the Orient is like a football match, where you are just about to score a touchdown and then somebody fumbles. Can you blame the grand stand for being disgruntled?

In a word, Dr. Wang's view of the United States was that it invariably followed British leadership in China; that it never took an independent stand. There is a body of opinion in China along this line, although it is altogether unjustified either by the history or by the personnel of the American diplomacy in China. This is particularly not true of Mr. MacMurray, who has proved one of the most brilliant diplomats that the American Government has ever sent to this country; less sensational than some of the political appointees, who have been his predecessors, less dramatic and startling, but much keener in his negotiations and possessing a much wider knowledge of the actualities of the situation in China. All Powers have to divide their diplomacy in China into two phases, one dealing with the day by day infringements of the rights of foreigners in China as provided for by the treaties and a constant protest against the danger to life and property of their nationals in China and the other dealing with broad, general principles affecting the general trend of international relations and the strong desire on the part of all Powers to give China every possible assistance to achieve unity and equality.

With regard to the first phase of a diplomat's work, Mr. MacMurray has invariably adopted a very stiff attitude toward the Ministry of Foreign Affairs of the Nationalist Government. In the Notes with regard to the murder of Walter F. Seymour, head of the American Presbyterian Mission at Tsining, Shantung province, he has demanded severe punishment for officers who do these inhuman and uncivilized acts. With regard to the seizure of American mission property, even within the Nationalist capital, the city of Nanking, Mr. MacMurray has addressed to Dr. Wang a note, unmistakable in the sternness of its tone. But when it comes to the general policy of the United States in China, the criterion is altogether a different one and, therefore, it was not surprising that on July 24, Mr. MacMurray addressed the following Note to Dr. C. T. Wang:—

"Excellency:—Under instructions of the Secretary of State, I have the honor to transmit to Your Excellency, on his behalf, the following note:—

Events in China have moved with great rapidity during the past few months. The American Government and people have continued to observe them with deep and sympathetic interest.

Early in the year the American Minister to China made a trip through the Yangtze Valley region, and, while in Shanghai, exchanged, on March 30, 1928, with the Minister for Foreign Affairs of the Nationalist Government the Notes in Settlement of the unfortunate Nanking Incident of March 24, 1927. In pursuance of the terms therein agreed upon, a Sino-American Joint Commission has been intrusted with the appraisal of damages suffered by the American nationals during that occurrence.

On January 27, 1927, I made a Statement of the position of the United States toward China to which I have often subsequently had occasion to refer in reaffirmation of the position of this Government. I stated therein that the United States was then, and, from the moment of the negotiations of the Washington Treaty, has been prepared to enter into negotiations with any government of China or delegates who could represent or speak for China, not only for putting into force the surtaxes of the Washington Treaty but for restoring to China complete tariff autonomy.

Ever since, the American Government has watched with increasing interest the development pointing toward co-ordination of the different factions in China and the establishment of a Government with which the United States could enter into negotiations. Informed through press despatches and through official reports which have, from time to time, been released to the press, the American people also have observed with eager interest these developments.

In a note addressed by the American Minister to China to the Minister for Foreign Affairs of the Nationalist Government at Nanking, on March 30 of the present year, in reply to a suggestion of the latter concerning revision of existing treaties, reference was made to the sympathy felt by the Government and people of the United States with the desire of the Chinese people to develop a sound national life of their own and to realize their aspiration for a sovereignty so far as possible unrestricted by obligations of an exceptional character; and it was stated that the American Government looks forward to the hope that there might be developed an administration so far representative of the Chinese people as to be capable of assuring the actual fulfillment of any obligations which China would of necessity have for its part to assume incidentally to readjustment of treaty relations.

In a communication addressed to me under date of July 11, 1928, Mr. Chao-chu Wu informs me that the Nationalist Government has decided to appoint plenipotentiary delegates for the purpose of treaty negotiation and that he is instructed to request that the Government of the United States likewise appoint delegates for the purpose.

The good will of the United States toward China is proverbial, and the American Government and people welcome every advance made by the Chinese in the direction of unity, peace, and progress. We do not believe in interference in their internal affairs. We ask of them only that which we look for from every nation with which we maintain friendly intercourse, specifically, proper and adequate protection of American citizens, their property, and their lawful rights, and, in general, treatment in no way discriminatory as compared with the treatment accorded to the interests of nationals of any other country.

With a deep realization of the nature of the tremendous difficulties confronting the Chinese nation, I am impelled to affirm my belief that a new and unified China is in process of emerging from the chaos of civil war, and which has distressed that country for many years. Certainly this is the hope of the people of the United States.

As an earnest of the belief and the conviction that the welfare of all the peoples concerned will be promoted by the creation in China of a responsible authority which will undertake to speak to and for the nation, I am happy now to state that the American Government is ready to begin at once, through the American Minister to China, negotiation with properly accredited representatives whom the Nationalist Government may appoint, in reference to the tariff provisions of the treaties between the United States and China, with a view to concluding a new treaty in which it may be expected that full expression will be given reciprocally to the principle of National Tariff Autonomy and to the principle that the commerce of each of the contracting parties shall enjoy in the ports and the territories of the other, treatment in no way discriminatory as compared with the treatment accorded to the commerce of any other country.

I avail myself of this opportunity to extend to Your Excellency the assurance of my highest consideration.

(Signed) J. V. A. MACMURRAY.

July 24, 10 p.m.

It is clear beyond a shadow of doubt that the offer for revision is limited to the "tariff provisions of the treaties between the United States and China." No reference is made to any other subject. Mr. MacMurray's Note, which was dated July 24 at 10 p.m. was published on July 26 by the *Kuo Min* and other news agencies, but on July 25, one day after the issuance of Mr. MacMurray's Note and one day previous to its publication, a treaty had actually been signed between the United States and China by Mr. MacMurray, representing the American Government and Mr. T. V. Soong, Minister of Finance, representing the Nationalist Government of China, definitely fulfilling the objective specified in Mr. MacMurray's Note to Dr. Wang. Mr. Soong went to Peking for the purpose of conferences with the numerous militarists gathered there on the subject of the resolutions of the economic and financial conferences, to which detailed reference was made in the last issue of the *Far Eastern Review*. The incidence of his presence in Peking afforded the opportunity for the Minister for the United States to discuss with an official of the Nationalist Government most concerned and most responsible for the tariff, the preparation of a new treaty concerning the tariff between the United States and China. These discussions reached a point where it was possible to sign an agreement and Mr. T. V. Soong was authorized by the Chairman of the Government Council, General Tan Yen-kai, and by the Minister of Foreign Affairs of the Nationalist Government to sign the agreement. The subsequent controversy as to his authority, therefore, was something in the nature of childish propaganda, as adequate credentials had been exchanged. The Soong-MacMurray treaty, which has the effect of opening the way, as it were, for this question of treaty revision and of affording the United States an opportunity for leadership in this regard, is here published in the English text:—

"The Republic of China and the United States of America, both being animated by an earnest desire to maintain the good relations which happily subsist between the two countries, and wishing to extend and consolidate the commercial intercourse between them have, for the purpose of negotiating a treaty designed to facilitate these objects, named as their plenipotentiaries:



The Government Council of the Nationalist Government of the Republic of China :

T. V. Soong, Minister of Finance of the Nationalist Government of the Republic of China : and

The President of the United States of America :

J. V. A. MacMurray, Envoy Extraordinary and Minister Plenipotentiary of the United States of America to China ; who, having met and duly exchanged their full powers, which have been found to be in proper form, have agreed upon the following treaty between the two countries ;

"Article I.—All provisions which appear in the treaties hitherto concluded and in force between China and the United States of America relating to rates of duty on imports and exports of merchandise, drawbacks, transit dues and tonnage dues in China shall be annulled and become inoperative, and the principle of complete national tariff autonomy shall apply subject however, to the condition that each of the High Contracting Parties shall enjoy in the territories of the other, with respect to the above specified and any related matters treatment in no way discriminatory as compared with the treatment accorded to any other country.

"The nationals of neither of the High Contracting Parties shall be compelled under any pretext whatever to pay within the territories of the other Party any duties, internal charges or taxes upon their importations and exportations other than those paid by nationals of the country or by nationals of any other country.

"The above provisions shall become effective on January 1, 1929, provided that the exchange of ratifications hereinafter provided shall have taken place by that date ; otherwise, at a date four months subsequent so such exchange of ratifications.

"Article II.—The English and Chinese texts of this treaty have been carefully compared and verified ; but, in the event of there being a difference of meaning between the two, the sense as expressed in the English text shall be held to prevail.

"This treaty shall be ratified by the High Contracting Parties in accordance with their respective constitutional methods, and the ratifications shall be exchanged in Washington as soon as possible.

"In testimony whereof, we, the undersigned, by virtue of our respective powers have signed this treaty in duplicate in the English and Chinese languages and have affixed our respective seals.

"Done at Peiping, the Twenty-fifth Day of the Seventh Month of the Seventeenth Year of the Republic of China, corresponding to the 25th day of July, 1928.

Sealed and signed : SOONG TSE VUNG.

Sealed and signed : J. V. A. MACMURRAY."

### Surprising Correspondence

It was after the signing of this treaty and while there was tremendous enthusiasm among the Chinese people, that the United States had assumed leadership in this regard and that progress was being made in the general subject of treaty revision, that an amazing and interesting exchange of correspondence took place between Dr. C. T. Wang and Mr. MacMurray.

It would appear as though Dr. Wang had altogether ignored the whole meaning of Mr. MacMurray's Note of July 24 and that he had forgotten the fact that the Soong-MacMurray treaty had been signed on July 25, for he addressed an undated communication to Mr. MacMurray, in which he seems to give the American Minister's Note an altogether different meaning from that which was intended and for which he was duly rebuked by Mr. MacMurray. The correspondence of this subject is a noteworthy contribution to the diplomatic literature of China.

Dr. Wang's Note is as follows :

Monsieur le Ministre :

I have the honor to acknowledge the receipt of Your Excellency's communication of July 24, transmitting a Note from the American Secretary of State regarding the question of readjustment of treaty relations between China and the United States.

The Nationalist Government feel much gratified to be apprised of the deep and sympathetic interest with which the American Government and people have been watching the recent development in this country, and of the readiness of the American Government to enter into negotiations at once, through your Excellency, with the representative of the Nationalist Government, for the purpose of concluding a new treaty. The Chinese people rejoice in the fact that the United States is yet the first Power to make a response, in a spirit of sincerity and good will, to the policy of treaty revision maintained by the Nationalist Government ; and that such frank co-operation between the American Government and people and the Chinese Government and people will not only put the traditional friendship between the two countries on a yet firmer and nobler foundation, but also promote the peace of the world.

It is the hope of the Nationalist Government that the negotiations soon to commence between China and the United States will result in a proper settlement of all questions which are in need of immediate solution.

I have the honor to inform Your Excellency that the Nationalist Government have appointed Dr. Chao-chu Wu as the plenipotentiary delegate to negotiate with the representative of the American Government. I deem it advisable to have the negotiations commenced at an early date, so that a new treaty may be concluded within the shortest possible period of time, thus ushering in a new epoch in the diplomatic relations between the two countries.

I avail myself of this opportunity to extend to Your Excellency the assurance of my highest consideration.

(Signed) CHENGTING T. WANG.

Mr. MacMurray's Note is as follows :—

Peking, July 30, 1928.

His Excellency,

Dr. C. T. Wang,

Minister of Foreign Affairs,  
Nationalist Government of  
China, Nanking.

Excellency :

I have the honor to acknowledge the receipt, on July 29, of the undated telegram in which you were so good as to communicate to me directly the English translation of a note, the original of which you advised me was being transmitted to me through other channels, in response to the telegram of July 24, 10 p.m., in which I had conveyed to you a note of that date from the Secretary of State.

Since the time at which it may be presumed your note was written, you have no doubt learned of the signature at Peking, early in the afternoon of July 25, of the Treaty regulating tariff relations between the United States and China. In the conclusion of that Treaty, the Government of the United States very promptly and completely fulfilled what had been offered in Mr. Kellogg's note of the 24th.

In order, therefore, to avoid any possibility of misconception as to the purposes of my Government under present circumstances, I must point out that, whereas your note to me refers to "negotiations soon to commence," it is now the fact that such negotiations as the American Government had in contemplation have already been satisfactorily concluded.

I avail myself of this opportunity to extend to Your Excellency the renewed assurance of my highest consideration.

(Signed) J. V. A. MACMURRAY.

### Britain Settles the Nanking Incident

The British solved their Treaty problem without much difficulty almost immediately after the signing of the Soong-MacMurray Treaty. The principal obstacle toward the development of the British treaty policy was the fact that the Nanking Outrage remained unsettled so far as Great Britain was concerned. Previous to the signing of the Huang-MacMurray agreement with regard to Nanking, there had been lengthy negotiations between Mr. Huang Fu and Sir Miles Lampson, the British Minister in Peking, but these came to nothing because Nanking could not offer terms which were acceptable to the British Government. However, such terms were offered to Mr. MacMurray and eventually the British said that they were quite prepared to settle with the Nanking Government on the basis of the Huang-MacMurray agreement. Although there are very slight changes in the wording and although the Chinese version is still garbled and grammatically distorted to give a false impression, the settlement which was reached between Sir Sidney Barton, British Consul-General in Shanghai and Dr. C. T. Wang is to all effect and purposes identical with the Huang-MacMurray agreement settling the Nanking Incident. In the following text of the Wang-Barton agreement settling the Nanking Incident, significant change in phraseology from the Huang-MacMurray agreement are italicized :

To H. E. Sir Miles W. Lampson, K.C.M.G., C.B., M.V.O., Peking.

Sir,—With reference to the Nanking Incident which took place on March 24, last year, I have the honor to inform Your Excellency that, animated by a desire to promote the most friendly feelings happily subsisting between the British and the Chinese peoples, the Nationalist Government are prepared to bring about an immediate settlement of the case along the lines already agreed upon as a result of recent discussions.

In the name of the Nationalist Government, I have the honor to convey in the sincerest manner to His Majesty's Government in Great Britain their profound regret at the indignities and injuries inflicted upon the official representatives of His Majesty's Government, the loss of property sustained by the British Consulate, and the personal injuries and material damage done to the British residents. Although it has been found, after investigations of the Incident that it was entirely instigated by the Communists prior to the establishment of the Nationalist Government at Nanking, the Nationalist Government nevertheless accept the responsibility therefor.

The Nationalist Government have in pursuance of their established policy, repeatedly issued orders to the Civil and Military Authorities for the continuous and effective protection of the lives and property of British residents in China. With the extermination of the Communists and their evil influences which tended to impair the friendly relations between the Chinese and British peoples, the Nationalist Government feel confident that the task of protecting foreigners will henceforth be rendered easier ; and the Nationalist Government undertake specifically that there will be no similar violence or agitation against British lives or legitimate interests.



In this connection, I have the pleasure to add that the troops of the particular division which took part in the unfortunate Incident, at the instigation of the Communists, have been disbanded. The Nationalist Government have in addition taken effective steps for the punishment of the soldiers and other persons implicated.

In accordance with the well accepted principles of International Law, the Nationalist Government undertake to make compensation in full for all personal injuries and material damage done to the British Consulate and to its officials and to British residents and their property at Nanking.

The Nationalist Government propose that for this purpose there be instituted a Sino-British joint Commission to verify the actual injuries and damage suffered by the British residents at the hands of the Chinese concerned, and to assess the amount of compensation due in each case.

I avail myself of this opportunity to express to Your Excellency the assurance of my high consideration.

(Sd.) WANG CHENG-TING.

August 9, 1928.

On August 9, the foregoing was acknowledged from the British Legation in Peking, quoting the Note, and continuing.

"I have also taken note of the orders recently issued by the Nationalist Government regarding the punishment of those implicated and regarding the prevention of similar incidents in the future and believing that prompt and full effect will be given to the intentions so expressed, I accept on behalf of His Majesty's Government in Great Britain Your Excellency's Note in settlement of the demands contained in the communication of April 11, 1927, addressed to the former Minister for Foreign Affairs

I avail myself, etc.

For His Majesty's Minister,

(Signed) SIDNEY BARTON.

H. E. Sir Miles W. Lampson

His Britannic Majesty's Minister.

Sir,—Referring to the Notes exchanged this day on the subject of the Settlement of the questions arising out of the Nanking Incident of March 24, 1927. I have the honor to invite Your Excellency's attention to the fact that on that date fire was opened upon Socony Hill, at Nanking, by the British war vessel "Emerald," then lying in port. In view of this fact, the Nationalist Government earnestly hope that His Majesty's Government in Great Britain will express regret at this action.

I avail myself, etc.

(Sd.) WANG CHANG-TING.

Sir,—I have the honor to acknowledge the receipt of Your Excellency's Note of to-day's date in which reference was made to the fact that on March 24, 1927, the British war-vessel, H.M.S. Emerald, then lying in port, opened fire upon Socony Hill at Nanking, and in which the hope was expressed that His Majesty's Government in Great Britain would indicate their regret at this action.

In reply, I have to point out that the firing referred to was in fact a protective barrage strictly confined to the immediate neighborhood of the foreign houses in which a number of British subjects had been driven to seek refuge from the assaults of an unrestrained soldiery, and not only did it provide the only conceivable means by which the lives of this party were saved from the danger that imminently threatened them, but it also made possible the evacuation of the other British residents at Nanking, who were in actual peril of their lives. His Majesty's Government in Great Britain, therefore, feel that the measures taken by H.M.S. Emerald were absolutely necessary for the protection of British life and property,\* however deeply they may deplore the fact that the circumstances at Nanking on March 24, 1927, were such as to render necessary the adoption of those measures.

I avail myself, etc.

For His Majesty's Minister,

(Signed) SIDNEY BARTON.

Peking, August 9, 1928.

H. E. Sir Miles W. Lampson,

His Britannic Majesty's Minister.

Sir,—Referring to the Notes exchanged this day on the subject of the settlement of the questions arising out of the Nanking Incident of March 24, 1927, I have the honor to express the hope that a new epoch will begin in the diplomatic relations between China and Great Britain, and to suggest that further steps may be taken for the revision of the existing treaties and the readjustment of outstanding questions on the basis of equality and mutual respect for territorial sovereignty.

I avail myself, etc.

(Sd.) WANG CHENG-TING.

Sir,—I have the honor to acknowledge the receipt of Your Excellency's Note of to-day's date in which you express the hope that a new epoch would begin in the diplomatic relations between Great Britain and China, and that further steps might be taken for the revision of the existing treaties and the readjustment of outstanding questions on the basis of equality and mutual respect for territorial sovereignty.

\* In the American Notes, this phrase reads: "its naval vessels had no alternative to the action taken;"

His Majesty's Government in Great Britain recognize the essential justice of the Chinese claim to treaty revision and, in their declaration of December 18, 1926, and their seven proposals of January 26, 1927, they have made their policy abundantly clear and have taken such practical steps as lay in their power to carry it into effect.

In order to give further expression to the friendly and sympathetic attitude which they have always maintained towards China, His Majesty's Government in Great Britain are prepared in due course to enter into negotiations with the Nationalist Government, through their only authorized representatives, on the subject of treaty revision. His Majesty's Government in Great Britain do not intend to allow the Nanking Incident to alter their previous attitude towards China and prefer to consider it as an episode bearing no relation to their treaty revision policy.

I avail myself, etc.

For His Majesty's Minister,

(Signed) SIDNEY BARTON.

Peking, August 9, 1928.

## Germany's Tariff Treaty

Germany, which does not enjoy extraterritorial rights in China or any of the so-called "unequal treaty" rights, is in quite a different position from the so-called treaty Powers, in that Germany has no vested interests to protect and is seeking to rehabilitate her trade in China at any cost. It is, therefore, not surprising that Germany should have been the first Power to follow the United States, in signing a Customs Treaty. It will be found that in the general tone of the new German Treaty that the principle and language follow the Soong-MacMurray Treaty, even to the extent that the most favored nation clause is included in the following language:

"The two High Contracting Parties agree that in all customs and related matters either of the High Contracting Parties shall not, within the territories of the other Party, be subject to any discriminatory treatment as compared with the treatment accorded to any other country."

This places Germany in the same position as the present Treaty Powers vis-a-vis China's tariff, a conditions which is much more satisfactory to Germany than that which had obtained heretofore. The German Treaty follows:—

"The Republic of China and the German Reich, animated by the desire further to consolidate the ties of friendship which happily exist between the two countries and to extend and facilitate the commercial relations between the two countries, have, for this purpose, decided to conclude a treaty and have named as their Plenipotentiaries, that is to say:—

"The President of the Council of the Nationalist Government of the Republic of China:

Dr. Chengting T. Wang, Minister for Foreign Affairs;

"The President of the German Reich:

Mr. H. von Borch, Envoy Extraordinary and Minister Plenipotentiary of the German Reich to China; who having communicated to each other their full powers and found them to be in good and due form, have agreed upon the following treaty between the two countries:

"Article I. For the purpose of attaining absolute equality of treatment in customs matters and in supplementing the arrangements between China and Germany of May 20, 1921, the two High Contracting Parties agree that in all customs and related matters either of the High Contracting Parties shall not, within the territories of the other Party, be subject to any discriminatory treatment as compared with the treatment accorded to any other country.

"The nationals of each of the High Contracting Parties shall under no circumstances be compelled to pay within the territories of the other Party higher or other duties, internal charges or taxes whatsoever upon the importation or exportation of goods than those paid by nationals of the country or by nationals of any other country.

"The provision in the exchange of notes annexed to the Sino-German agreement of May 20, 1921, according to which German import goods shall pay duties in accordance with the General Tariff Regulations prior to the general application of the Autonomous Tariff Regulations, shall be hereby annulled.

"Article II. The two High Contracting Parties will enter as soon as possible into negotiations for the purpose of concluding a Treaty of Commerce and Navigation based on the principle of perfect parity and equality of treatment.

"Article III. The present treaty has been drawn up in Chinese, German and English; in case of a difference of interpretation the English text shall prevail.

"Article IV. The present treaty shall be ratified as soon as possible and shall become valid on the day on which the two Governments shall have notified each other that the ratifications have been effected.

"Done in duplicate at Nanking on the Seventeenth Day of the Eighth Month of the Seventeenth Year of the Republic of China, corresponding to the Seventeenth Day of August, Nineteen Hundred and Twenty-eight.

(Signed) Chengting T. Wang,

Plenipotentiary and Minister for Foreign Affairs of the Nationalist Government of the Republic of China.

(Signed) Herbert von Borch,



## Manchuria

We must now turn to the Manchurian question under the general consideration of China and her treaties. To Japan, Manchuria is not only a source of supply for food and raw materials, but Japan regards Manchuria as her first line of defense *vis-a-vis* Russia. Japan has fought two wars in Manchuria to protect her territorial integrity and her existence as an independent nation and in both wars the actual aggressor was Russia. Even the Sino-Japanese War was fought more to keep Russia away from Japanese territory than to humiliate China. Subsequent to the Russo-Japanese War, Japan's development in Manchuria has been enormous and it should frankly be admitted by the Japanese that that development aimed not only at the economic development of Manchuria, but at setting up in Manchuria a military defence against Russian aggression.

Conflicts between Chinese officials and the Japanese in Manchuria have been continuous but unimportant. It is only to be expected that there should have been differences of opinion and of purpose. As long as Marshal Chang Tso-lin was alive, he maintained order in Manchuria and although Marshal Chang Tso-lin and the Japanese were not always in agreement, the mere fact that order was maintained, lives and property protected and that investments were safeguarded, satisfied the Japanese that their own position and interests were not in danger.

The Nationalist victory over the North, however, created a new situation in Manchuria. Even while Marshal Chang Tso-lin was in Peking, the Japanese were convinced that an effort would be made to disrupt life in Manchuria as it had been disrupted in China, to create disorders and to create Communistic or semi-Communistic conditions there. The *Osaka Asahi*, in reference to a Memorandum presented both to the Peking and Nationalist Governments that Japan would take appropriate steps to maintain peace and order in Manchuria, made the following comment, which is important because it gives both the Chinese and the Japanese view.

May 29, 1928.

The Government of Japan intimated to Peking and Nanking its determination to take an effective and appropriate step for the preservation of peace and order in Manchuria. This is taken as implying that Japan is prepared to resort to arms in case of necessity. Nanking and Peking protest against these communications on the strength of the Washington treaty. China insists that she is responsible for the peace and order of Manchuria and that she holds sovereign power over that country, and further that its defense by Japan constitutes an infringement of China's sovereignty.

Nobody contradicts that Manchuria is part of China's territory, but is China entitled to claim that she is equal to the exercise of power? China's sovereignty was imperilled at the critical moment, when the Russo-Japanese war broke out, and she was saved from that danger by Japan. China recognized by treaty that Japan's efforts put a limit to her sovereign power, and this is an established fact that cannot be gainsaid. Granting that Manchuria is under the complete sovereign power of China, Japanese there now number 200,000 and, if Koreans are added, the number exceeds 1,000,000. The status of Manchuria is very different from that of Shantung.

Japan has made enormous investments in Manchuria through the South Manchuria Railway and other enterprises, and although the Powers, especially Russia, have interests in Manchuria, their rights are not like those of Japan. However antagonistic a nation may be against Japan, it will not find it possible to contradict her claims. The position of Japan in Manchuria is an indisputable fact. According to advices from Washington, the United States Government has recognized that Japan has particular interests in the Three Eastern Provinces.

Japan made a formal statement at the Washington Conference in respect of her Manchuria policy, and the American Government did not object to it. The Manchuria policy of Japan has since been accepted by the international community. The United States desires that Japan's claims shall not form the basis of exclusivism. The Ishii-Lansing agreement used the term "special interests," whereas the American Government now uses the phrase "particular interests." The meaning is the same, in our opinion. We understand that the United States pressed Japan to abrogate that agreement from the apprehension that Japan would exclude foreign interests from Manchuria.

In presenting the memorandum to China, Japan avoided using the terms "special position" or "particular interests" but stated that she was resolved upon taking effective and appropriate means for maintaining law and order in the Three Eastern Provinces. This shows how careful Japan is that her action may not arouse the suspicion of the United States. We should like to draw public attention to the delicate position of Japan in the Three Eastern Provinces and Mongolia. It has to be borne in mind that the policy which the Imperial Government now undertakes to pursue from the apprehension of probable disturbance in Manchuria consequent upon a battle around Peking and Tientsin accords it an opportunity to re-assert through a tacit understanding the particular or special interests of Japan.

We have no idea what the effective and appropriate step is, but it is our earnest hope that it will be accepted by the international community as reasonable and also that the protest of China will be dismissed as academic. The Imperial Government must be cautious and prudent.

The death of Marshal Chang Tso-lin created a wholly new situation in Manchuria. There has naturally been considerable speculation as to who bombed Marshal Chang Tso-lin, but that question falls into the category of unsolved conundrums like the problem as to who started the Great War and the more propagandistic retort as to who won the Great War. The fact remains that Marshal Chang's death serves no good purpose, for as long as he lived, he maintained peace and order in Manchuria and preserved China's territorial integrity there. Immediately after his death, his son, Marshal Chang Hsueh-liang succeeded to his authority over the Three Eastern Provinces. Although the "Young General" is very young in years and prestige, it was felt by the Manchurian generals and people, that because of his father's reputation and prestige, he alone, could hold Manchuria together, but Japan naturally was worried as to whether he could really succeed, first, because every change in China is fraught with great danger and, secondly, because of Soviet Communistic efforts out of Mongolia. Had Dr. C. T. Wang not abrogated the Sino-Japanese Treaty referred to above, it is more than probable that Japan would not have risked popular indignation in China by opposing the recognition of the Nationalist Government's authority in Manchuria, but the moment that Treaty was abrogated, the huge Japanese interests and rights in Manchuria were imperilled and Japan opposed this union, even to the extent of meddling in the internal affairs of China. Marshal Chang Hsueh-liang's idea undoubtedly was to recognize the authority of the Nationalist Government and then to set up an autonomous Government for the three provinces, but as the recognition of the Nanking Government involved the recognition of the abrogation of the treaty, Japan very forcibly protested and prevented such recognition. There has naturally been great criticism of Japan in China and in other places because of this action, but the experience of the British at Hankow, Kiukiang, Nanking, and Chinkiang, the experience of the United States with regard to the seizure of mission property and the Japanese experience at Tsinan gave the Japanese cause to fear that if the Nationalists had free play in Manchuria they might follow a distinctive program there as they have in other places. It is a question whether a national must wait for declaration of war to protect her vital interests. Mr. Hughes's interpretation of the American right to intervene in South America would seem fully to justify Japan's right to intervene in Manchuria. The Japanese Note on this subject follows:

The following is a copy of the Memorandum which Mr. Yoshizawa, the Japanese Minister, acting under instructions from his Government, handed to Marshal Chang Tso-lin with the necessary explanation early this morning.

The same Memorandum has been handed to Generals Chiang Kai-shek, Feng Yu-hsiang and Yen Hsi-shan or their respective agents:—

"The life of the population in China is characterized by extreme unrest and distress owing to the constant disturbances there, which have now extended over many years, and foreign residents enjoy there no assurance of safety in the pursuit of their occupations. It is accordingly the earnest desire of the Chinese and foreigners alike that the disturbances should terminate as soon as possible, in such a manner as may lead to the emergence of a united and peaceful China. Especially is this keenly hoped for by Japan, whose interests are especially and deeply involved on account of her being China's nearest neighbor.

"The disturbances, however, now threaten to spread to the Peking and Tientsin districts, and it is feared that Manchuria may also be affected. "The Japanese Government attach the utmost importance to the maintenance of peace and order in Manchuria, and are prepared to do all they can in order to prevent the occurrence of any such state of affairs as may disturb the peace and order, or constitute a probable cause of such disturbance.

"In these circumstances, should the disturbances develop further in the direction of Peking and Tientsin and the situation become so menacing as to threaten the peace and order of Manchuria, the Japanese Government, on their part, may possibly be constrained to take appropriate and effective steps for the maintenance of peace and order in Manchuria.

"It must be noted, however, that the policy of the Japanese Government, which consists in maintaining an attitude of strict neutrality towards the contending forces, remains unchanged in every respect, and that should the course of events be such as to render the above-mentioned measures imperative, the Japanese Government will, in respect of the time and method of its adoption, exercise their care to provide against any unfair consequences arising to either of the two opposed parties."—*Reuter*.



A further statement on the Japanese attitude is given by the *Toho* News Agency and is of very great importance because it indicates very clearly the general attitude of the Japanese Government:

Interviewed to-day, the Premier, Baron Tanaka, with reference to the question regarding the Three Eastern Provinces, made the following statement:—

"Apropos of the report that Mr. Hayashi, Japanese Consul General at Mukden, recently gave advice to General Chang Hsueh-liang as to what steps the latter should take in his administration, I have received from the said Japanese Consul General an official report in connection therewith to the following effect:—

"On July 16, General Chang Hsueh-liang sent to Mr. Hayashi his representative with a message stating that as he was still in mourning, he was compelled to stay in and at the same time expressing his desire that in the circumstances, Mr. Hayashi would visit him. In compliance with that request, the Japanese Consul-General visited General Chang, when the latter asked him for suggestions, in a private capacity and not as the Consul-General representing the Japanese Government, with regard to the question of his coming to terms with the Nationalist Government.

"Accordingly, Mr. Hayashi expressed the personal opinion that as conditions in Central China had not yet settled down and as various diplomatic issues were likely to arise for the South to solve resulting in the prospect of relations between the Nationalist Government and the Powers becoming somewhat uncertain, it would seem advisable for General Chang to watch the situation for some time to come.

General Chang later called a conference of the Peace Preservation Committee of the North-Eastern Provinces. As a result, it was decided that the question of compromise would be considered after the Nationalist Government had settled down. General Chang, through one of his secretaries, who visited Mr. Hayashi a few days ago, notified the Japanese Consul-General of the adopting of this policy adding was given not to Mr. Hayashi as a representative of the Japanese Government but as a personal friend.

"The foregoing is the truth of the case and the allegation that the Japanese Government have given advice or suggestions of any nature to General Chang Hsueh-liang is absolutely without foundation.—*Toho*.

According to Reuter's, another conversation took place as late as August 10 and was of the following nature:—

It is reported from a reliable source that at 10 a.m. yesterday Marshal Chang Hsueh-liang, accompanied by his secretary, Mr. Wang Chai-tung, paid a return visit to Baron Hayashi, Baron Tanaka's special representative, at the Japanese Consulate to express his thanks for the Baron's attendance at his father's funeral.

Marshal Chang Hsueh-liang proceeded to express a desire for friendly relations between China and Japan, co-operating in the development of the Three Eastern Provinces.

Baron Hayashi replied that Marshal Chang Hsueh-liang already understood Japan's views regarding a reconciliation between Manchuria and the Nationalist Government. Japan, he declared, disapproved of the suggested reconciliation because the internal condition of the Nationalist Government was far from settled and because of its "reddish" taint. Japan opposed it particularly as such a move would jeopardize Japan's special privileges and acquired rights in the Three Eastern Provinces.

Japan, he went on, made the request that Marshal Chang Hsueh-liang should adopt a watchful waiting policy for the time being. Should the Marshal disdain Japan's wishes and hoist the Nationalist flag, Japan

had decided to act on her own initiative with a free hand: therefore she hoped that Marshal Chang would act accordingly and not be influenced by any opposition, which he should suppress with force of arms, if necessary receiving Japan's full support.

Marshal Chang Hsueh-liang replied that he could not receive in silence Baron Hayashi's repeated personal warnings, however deeply he appreciated them. Being a Chinese, he said his thoughts were those of a Chinese and, therefore, he wished to see China unified by the conclusion of a peace with the Nationalist Government so that a policy of peaceful and economic development might be inaugurated. Although he was well aware that the Nationalist Government was not yet perfectly consolidated, he believed it to be, on the whole, effective. He had to adopt the will of the people as his will and, he said, he must not act contrary to that will. He trusted that Japan would not throw all caution to the winds and risk her good international relations just on account of an imagined fear of a situation which is perfectly peaceful.

Baron Hayashi retorted that Japan had decided against the reconciliation and would prevent it even if she should interfere in China's internal affairs. Baron Tanaka, he remarked, had made his decision and only wished to know that of Marshal Chang Hsueh-liang.

Marshal Chang repeated that the people's will was his will.

At this point the discussion was closed with a threat of serious consequences if Marshal Chang disregarded Baron Tanaka's will.

Immediately Marshal Chang returned to his office he called a meeting of the Committee of Peace and Order in order to debate upon the grave situation with which he was faced.

The present status is that Manchuria is still independent of Nanking. There are constant conversations between the Manchurian Government and the Nationalist Government and the Manchurian Government and the Japanese Government, but nothing has thus far been accomplished either in stabilizing Japanese Manchurian relations or in bringing about a reunion between Manchuria and the Nanking Government. The scene is, however, becoming increasingly less peaceful, particularly as the Mongolian Soviet Republic is beginning to send partisan forces into Manchuria with a view to disturbing the peace of the province of Heilungkiang. At the moment of writing war between Manchuria and Mongolia is imminent and as the Mongolian Soviet Republic is not altogether unrelated to more radical elements in the Nationalist Government, there is reason to suspect that the disturbance of Manchuria is instigated by Nanking and is in effect a reprisal for Japan's insistence upon Manchuria's independence.

Were there no Russian problem in Manchuria; were there not the fear of the Communists; were there no danger of the disturbance of the economic life of the Three Eastern Provinces, there can be little question but that Japan would have come to an arrangement with both the Manchurian and Nationalist Governments and that union between Manchuria and Nanking would have been effected, but in the face of Communist uprisings in the province of Hunan, the possibility of war in the Yangtze Valley and the increased activity of the Communist Party of China, Japan dares not imperil her first line of defense against the Red imperialists of Soviet Russia.

## An Historical Survey of the Anti-Japanese Boycott Movement: Their Economic Consequences

By Moriyoshi Taba

**A**SIDE from the sheer political and diplomatic interpretation of the anti-Japanese boycott movements which broke out so vehemently every two or three years in China to the detriment of the present Sino-Japanese Commercial Treaty, we want to call attention of the general public, Chinese as well as foreigners, to the serious fact that the abuse of this sort of an economic weapon does not only injure the friendly relations and social intercourse between the Japanese and Chinese peoples in good faith, but it displaces, though temporarily, the economic life of both neighbor nations of the East.

In view of the grave consequences of the boycott movements, we do not think it idle at this moment of social and economic unrest to recall the past developments of the anti-Japanese boycott move-

ments and their economic consequences which so often served to make a great gap in the amity of both countries. Meantime, our present survey will be limited to the aspects of the first five boycotts, and as for the ones which broke out later in 1925, 1927 and the present one, we shall reserve them for another opportunity.

### The First Anti-Japanese Boycott and Trade

The first anti-Japanese boycott movement in China, as far as the record goes, can be traced about twenty years back to the year 1908, two years after the Russo-Japanese War, when the so-called "Tatsu Maru Case" became the apple of discord between the Japanese Authorities and the then Imperial Chinese Government.



A Japanese steamer, Tatsu Maru (3,143 tons), of the Kobe Tatsuma Steamship Co., which left Kobe on January 26, 1908, bound for Macao loaded with arms and ammunition consignable to a trader in Macao, was unfortunately seized in the territorial waters of Portugal and detained at Canton by the Chinese gun boats.

The Japanese Government lost no time in making a strong protest to the Peking Authorities, and after exchanges of protests and counter-protests and prolonged negotiations, it succeeded in obtaining the release of the detained steamer and the crew attendant with due apology on the part of the Chinese. But whoever dreamed that the case led to the first anti-Japanese movement which subsequently broke out during March all over Canton, Hongkong and the neighboring districts?

The boycott initiated by the Canton Autonomy Association and backed up by the Peking and Canton Authorities, so it was alleged, was focussed on the campaign for the exclusion of Japanese goods and advancement of Chinese products at the cost of the former. The interested districts were filled with anti-Japanese propaganda, accompanied by demonstrations and unwarrantable practices. In sympathy with the agitation at home, the Chinese abroad, *viz.*, Singapore, South Sea Islands, Australia and San Francisco, raised the chorus of anti-Japanism. The boycott which affected seriously Canton and Hongkong merchants lasted about seven months.

So much for the outline of the cause of the "Tatsu Maru Case," and we shall proceed to get a glance at its economic effects on Japan's China trade.

Japan's China trade, stimulated by the great efforts of the Japanese to promote foreign trade after the Russo-Japanese War, made a giant progress as far as 1906, while in the following year, it marked a decline by the total amount of Y30,000,000 and in 1908, when the "Tatsu Maru Case" broke out, it further showed a heavy decline partly due to the anti-Japanese agitation.

By way of the general review of trade conditions in the year under review, as compared with the preceding year, we shall give the following table:—

	EXPORTS TO CHINA (In Y.1,000)			IMPORTS FROM CHINA (In Y.1,000)		
	190	1908	1909	1907	1908	1909
January ..	4,575	3,510	3,723	5,820	7,460	2,898
February ..	7,922	5,035	5,669	3,033	3,615	2,338
March ..	7,548	6,772	6,011	2,033	2,260	2,877
April ..	7,436	7,455	6,562	5,696	5,023	3,975
May ..	9,028	6,305	8,020	5,252	4,105	4,259
June ..	8,312	5,484	5,430	3,406	4,058	4,444
July ..	7,139	4,027	5,068	3,194	2,786	3,460
August ..	6,216	4,481	5,123	2,119	2,276	2,294
September ..	6,976	4,689	5,538	2,748	3,203	2,646
October ..	7,997	5,851	7,023	7,066	5,362	4,402
November ..	6,879	3,667	7,817	10,153	5,305	6,853
December ..	5,591	3,230	7,103	8,662	5,513	6,440
Total ..	85,619	60,506	73,087	59,182	50,966	46,886

The above table shows that Japan's China trade in 1908 witnessed a heavy decline amounting to the sum of Y.25,000,000 in exports and a decline to the amount of Y.8,000,000 in imports respectively, as compared with that of the preceding year. However, the decline of trade cannot be solely attributed to the anti-Japanese boycott, in view of the fact that the year 1908 witnessed a bad crop of agricultural products and a heavy fall of silver prices in China which caused to diminish the purchasing power of the Chinese.

Be that as it may, there can hardly be any room to doubt that the anti-Japanese boycott dealt a hard blow to Sino-Japanese trade, seeing that Japan's exports in 1908 to South China, where the boycott fever was most high, marked a heavy decline, as compared with those of the preceding year. The trade analysis arranged according to the destination of the Japanese products exported to China shows how Japan's exports to South China declined in 1908.

The analysis (In Y.1,000) follows:—

	MANCHURIA			NORTH CHINA		
	1907	1908	1909	1907	1908	1909
January ..	9	14	26	710	507	624
February ..	5	1	38	2,575	1,651	1,726
March ..	455	443	540	2,480	1,858	1,924
April ..	607	562	763	2,314	2,002	1,888
May ..	452	578	1,361	2,594	1,858	1,879
June ..	368	677	671	1,935	1,425	1,237
July ..	411	865	497	2,739	1,240	1,260

August ..	498	378	420	1,887	1,180	1,644
September ..	641	562	560	1,929	1,238	1,484
October ..	848	745	66	1,956	1,717	1,729
November ..	296	203	398	1,792	1,224	2,488
December ..	13	32	106	465	679	1,190

	CENTRAL CHINA			SOUTH CHINA		
	1907	1908	1909	1907	1908	1909
January ..	3,647	2,779	2,850	172	170	109
February ..	5,181	3,292	3,683	154	70	171
March ..	4,527	4,415	3,355	79	62	61
April ..	4,377	3,752	4,002	120	128	44
May ..	5,808	3,810	4,783	154	67	97
June ..	5,831	3,160	3,342	152	122	107
July ..	4,365	2,494	3,121	134	95	128
August ..	3,692	2,668	2,890	117	81	90
September ..	4,247	2,581	3,362	245	190	102
October ..	5,017	3,123	4,129	65	134	67
November ..	4,725	1,961	4,793	43	187	100
December ..	4,903	2,253	5,736	173	123	116

	DESTINATION UNKNOWN		
	1907	1908	1909
January ..	37	44	114
February ..	7	19	49
March ..	7	13	104
April ..	18	11	65
May ..	20	11	27
June ..	25	101	88
July ..	30	133	62
August ..	22	173	79
September ..	3	128	32
October ..	21	132	31
November ..	23	143	37
December ..	38	143	46

## The Second Anti-Japanese Boycott and Trade

The second anti-Japanese boycott in 1909 originated in Japan's declaration as regards the reconstruction of the Antung-Mukden Railway which connects the South Manchuria Railway and the Korea Railway. By virtue of the Peking Treaty signed in 1905, Japan being necessitated, in view of the nature of the railway serving as an international traffic line between the Far East and Europe *via* Siberia, to reconstruct urgently the Antung-Mukden Railway which had been originally built by Japan for military purposes, she opened negotiations on the reconstruction question with the Peking Government, which, however, not only rejected the Japanese proposals, but, on the contrary, requested the Japanese Government to cancel the right for policing the railway, withdrawing the railway garrison from the Manchuria Railway zone.

But, owing to the conciliatory attitude of both Japanese and Chinese Authorities, they succeeded in exchanging the memorandum in August, 1909, as regards the reconstruction of the said railway and further in concluding in September the Sino-Japanese Agreement covering Manchuria. Hereupon, the Chinese political horizon was clouded with the anti-Japanese feeling.

The year 1909, in spite of the second anti-Japanese boycott, witnessed a slight increase of Japan's exports to China, as compared with those of the preceding year, owing to the localization of the boycott which was limited mainly to Manchuria, while the import trade resulted in a remarkable decline. On the whole, the boycott of that year which was started by the official circles for some ulterior motives, only being followed by the rather indifferent merchant classes, ended in a sad fiasco, and dealt a slight blow to Sino-Japanese trade. The decrease in Japan's import trade was to a greater part to be attributed to the internal business depression of Japan.

The following trade returns will show no particular decrease of Japan's exports to the Manchuria districts. (In Y.1,000)

	MANCHURIA		
	1907	1908	1909
January ..	9	14	26
February ..	5	1	38
March ..	455	343	540
April ..	607	562	763
May ..	452	578	1,361
June ..	368	677	671
July ..	411	865	497
August ..	498	378	420
September ..	641	562	560
October ..	848	745	66
November ..	296	203	398
December ..	13	32	106

However, taken all round, it cannot be denied that the boycott proved a dampning factor to the export trade of Japan which otherwise might have improved in consideration of the favorable conditions then prevailed in China.



The following statistics will explain how Japan's staple goods exported to China in that year were affected :— (In Y.1,000)

Articles	1907	1908	1909
Cotton piece goods .. ..	4,738	4,204	6,818
Cotton yarn .. ..	25,203	16,448	29,001
Patent medicine .. ..	261	156	214
Soap .. ..	422	395	483
Socks .. ..	138	123	160
Cotton underwear .. ..	121	83	94
Tobacco .. ..	668	328	210
Beer .. ..	—	266	248
Sea products .. ..	3,225	3,839	2,954
Sugar .. ..	1,533	2,418	3,959
Matches .. ..	4,136	4,622	5,183
Timber .. ..	3,488	1,486	1,022
Coal .. ..	7,533	7,546	7,183
Sleepers .. ..	1,542	1,006	1,073

In the above table, we can understand that such staples as tobacco, beer, sea products, timber and coal were remarkably affected, while other articles remained favorable despite the boycott.

### The Third Anti-Japanese Boycott and Trade

The third anti-Japanese boycott was launched in 1915 when the notorious Twenty-one Demands were proposed by the Japanese Government and accepted by the late President Yuan Shi-kai of China.

When reports of the Japanese Demands were propagated all over the world, all China was aflame with the anti-Japanese agitation which consequently led to the severance of Sino-Japanese economic relations. The boycott which began in May and showed itself most seriously in Peking, Shanghai, Hankow, Changsha, Canton and other capital cities, backed up by the various anti-Japanese Associations and Societies and fanned by the jingoist papers, lasted about four months. Owing to the Sino-Japanese negotiations as regards the Demands which were opened during early January, 1915, the anti-Japanese boycott movement went from bad to worse and reached its fiercest point during July, followed by the gradual decline of Japan's exports to China, while, strange as it may appear, Japan's imports from China showed an increasing tendency, which, however, was attributed to the development of domestic industries of Japan stimulated by the War boom and to the Chinese exporters' efforts to find outlet for their products in Japan, in spite of the boycott agitation, being tabooed in European countries.

The export and import trade figures of Japan during 1915 follow :—

	EXPORTS TO CHINA (In Y.1,000)			IMPORTS FROM CHINA (In Y.1,000)		
	1913	1914	1915	1913	1914	1915
January ..	11,938	13,481	9,818	5,683	4,374	4,148
February ..	13,137	16,408	10,768	3,942	3,200	5,184
March ..	14,710	18,115	12,040	3,214	3,820	6,834
April ..	14,400	15,693	10,859	5,557	4,977	8,844
May ..	11,624	15,238	9,396	6,165	6,598	9,380
June ..	11,050	12,698	8,646	4,608	5,603	5,387
July ..	12,354	13,446	10,530	5,582	5,236	6,090
August ..	9,520	9,929	13,054	3,730	3,785	5,239
September ..	13,910	12,098	13,946	3,875	4,243	7,144
October ..	14,615	11,422	14,427	5,343	5,963	8,884
November ..	15,167	11,422	14,428	6,003	5,760	8,618
December ..	12,235	12,420	13,213	7,521	4,746	10,095
Total ..	154,660	162,370	141,125	61,223	58,305	85,847

Japan's China trade which did not suffer in the import trade suffered a great deal in the export trade. Careful observers can easily find in the following table how Japan's exports to North and Central China declined during January-July quarter :—

	EXPORTS TO NORTH CHINA (In Y.1,000)		EXPORTS TO CENTRAL CHINA (In Y.1,000)	
	1915	1914	1915	1914
January ..	2,707	2,479	5,895	9,696
February ..	3,269	5,797	6,128	9,287
March ..	4,355	5,628	5,811	10,282
April ..	4,272	5,297	4,803	8,276
May ..	3,745	5,241	3,993	7,316
June ..	3,773	4,045	3,860	6,872
July ..	4,015	3,854	5,740	7,585
August ..	3,989	2,410	7,561	6,108
September ..	4,575	3,209	7,192	6,771
October ..	4,319	2,908	7,378	6,500
November ..	4,617	3,890	7,955	6,084
December ..	5,111	3,725	6,449	7,505

Further the following analysis will serve to show the general trade conditions of the staple goods exported to China during 1915, as compared with the preceding two years :— (In Y.1,000)

Articles	1913	1914	1915
Cotton yarn .. ..	60,096	64,559	55,503
Cotton piece goods .. ..	18,965	26,189	27,332
Cotton clothing .. ..	812	717	486
Hosiery underwear .. ..	863	773	817
Copper .. ..	9,401	9,227	1,015
Coal .. ..	7,333	7,459	8,851
Timber .. ..	3,338	4,041	2,464
Matches .. ..	4,829	4,013	3,749
Camphor .. ..	831	825	1,255
Earthenware .. ..	386	458	477
Umbrella .. ..	1,186	1,297	1,131
Toys .. ..	229	277	204
Sugar .. ..	14,270	11,526	8,582
Agar-agar .. ..	356	341	279
Cuttle-fish .. ..	570	818	625
Sea-weed .. ..	1,913	1,822	1,836

As is shown in the following table, we can see that Japan's cotton yarn export trade remarkably declined, recording 33,298 piculs, which were roughly valued at Y.4,000,000, as an export decrease, during the March-May quarter, as compared with the corresponding quarter of the preceding year :—(In Piculs) \*

	1915	1914
March .. ..	44,091	53,695
April .. ..	40,448	47,377
May .. ..	33,707	50,472
Total ..	118,246	151,544

The export trade of cotton piece goods suffered a great deal during the March-May quarter, while, owing to the brisk business during the autumn quarter, the export of the same goods during the year showed a slight increase as compared with that of the preceding year, enjoying a "free hand" in the China market in the absence of foreign products.

On the other hand, the export of such staple goods as sugar, sea products, timber, matches, copper and others also declined heavily, owing to the boycott.

### The Fourth Anti-Japanese Boycott and Trade

The fourth anti-Japanese boycott movement is attributed to the Shantung question which overshadowed, in 1919, all international affairs in the Far East after the Great War. When the Chinese proposals at the Versailles Conference were rejected by the Allied and Associated Powers, and the unfavorable news reached China, the nation-wide agitation against Japanese goods was launched on the grandest scale, covering not only China Proper and Manchuria, but such foreign cities as Vladivostok, Singapore, Batavia, Bangkok and San Francisco. The agitators rejected the use of Japanese goods, banknotes, steamers; they refused the transportation of Japanese goods, and Chinese papers barred out Japanese advertisements. In the meantime, the boycott developed into riot, often injuring their fellow countrymen dealing in Japanese goods and seizing Japanese goods on the way to be forwarded to the consignees. The boycott was most vehemently continued in Mukden, Peking, Tientsin, Tsinan, Shanghai, Hankow, Canton, Foochow and other capital cities. The moving figures of the boycott were as usual student bodies.

However, as to the practical effects of the fourth anti-Japanese boycott movement upon Japan's China trade, we can hardly see any outstanding decline in both exports and imports, in spite of a serious nature of the boycott on the grandest scale. More precisely, it is true that there was recorded a slight decline in Japan's export trade during the June-July-August quarter, but the visible decline in the trade returns should be considered with a grain of salt, seeing that the quarter is set aside every year as the dull season for Japan's export trade to China.

Japan's exports and imports during 1919, as compared with the preceding two years follow :—

JAPAN'S EXPORTS TO CHINA (In Y.1,000,)			
	1917	1918	1919
January .. ..	17,644	20,625	30,214
February .. ..	20,505	24,528	34,868
March .. ..	26,933	38,924	37,586
April .. ..	26,967	32,388	42,533
May .. ..	28,526	30,693	43,017
June .. ..	23,526	23,458	32,379
July .. ..	22,868	22,464	37,363
August .. ..	25,681	22,568	29,475
September .. ..	29,692	27,637	26,457
October .. ..	32,122	38,042	44,065

\*133 lbs.



November .. .. .	38,481	38,084	45,087
December .. .. .	25,435	39,738	44,005

Total .. 318,380 359,150 447,049

#### JAPAN'S IMPORTS FROM CHINA (In Y.1,000)

	1917	1918	1919
January .. .. .	9,084	17,147	29,850
February .. .. .	6,035	13,518	19,917
March .. .. .	7,601	14,314	15,371
April .. .. .	7,175	16,684	20,602
May .. .. .	9,647	18,264	25,770
June .. .. .	11,050	16,950	27,171
July .. .. .	9,876	17,512	30,290
August .. .. .	11,308	20,054	30,019
September .. .. .	10,117	23,665	25,376
October .. .. .	11,249	27,080	28,331
November .. .. .	15,475	53,464	31,220
December .. .. .	24,654	43,055	38,183

Total .. 133,271 281,707 322,100

Aside from the import trade from China which was affected more or less, we shall review the export trade to China, which showed a decline to a certain extent as a whole and, especially, exports to Central China where the boycott was most vehement, marking a damp result.

The following table will show the general aspects of Japan's Exports to Central China:—(In Y.1,000)

	1918	1919
January .. .. .	12,515	16,722
February .. .. .	12,540	17,511
March .. .. .	23,588	17,262
April .. .. .	18,469	21,675
May .. .. .	17,031	24,117
June .. .. .	13,358	13,891
July .. .. .	13,309	17,112
August .. .. .	12,499	13,484
September .. .. .	16,909	13,752
October .. .. .	20,105	27,239
November .. .. .	18,566	24,277
December .. .. .	22,641	22,535

Judging from the above table, we can understand that the general decline in Japan's exports to China during the boycott (May-September quarter) can be attributed to a gradual decline in Japan's exports to Central China. That Japan's exports to Central China conspicuously declined can be seen in the following analysis which indicates the trade figures from May to September, as compared with those of Japan's total exports to China during the same quarter.

Months	Total exports to China	Decrease as compared with May (Y.1,000)	Exports to Central China	Decrease as compared with May
May .. .. .	43,017	—	24,117	—
June .. .. .	32,379	10,638	13,891	10,226
July .. .. .	37,363	5,654	17,112	7,005
August .. .. .	29,475	13,542	13,484	10,634
September .. .. .	26,457	16,559	13,752	10,365

The above table shows that Japan's exports declined in the neighborhood of ten million yen every month during the term under review, in spite of the favorable situation for China to import Japanese goods with the gradual rise in the silver quotations. It is greatly regrettable that the favorable tendency of China's import trade was hampered by the boycott, which inevitably proved to be the pressing factor to the Chinese life at large, due to the general advance of prices all over the land.

The effect of the boycott on the Sino-Japanese trade greatly differs according to (1) the necessities of life and luxuries, and (2) the particular goods enjoying the monopoly value or markets and the general goods which can be replaced by the Chinese or foreign goods. The necessities of life and goods of monopoly value or markets as a whole do not suffer so heavily as the luxuries and general goods. Further, such particular products as are yearly demanded or transacted during that season of the year suffer a greater deal than those which are demanded or transacted at other seasons. For instance, mercerized cotton yarn, refined cotton yarn, beer, paper, sugar, dyestuff, enamelled ironwares, electric machines and parts, window glass, needles, watches and clocks, soap, bleaching powder, bicycles and tyre, etc., which enjoyed a monopoly to a certain extent, suffered less at the outset of the boycott, as compared with machine oil, tanned goods and cement which were in the competitive situation with the Chinese or foreign products; silk goods, patent medicine, hosiery goods, straw hats, umbrellas which were on demand or under course of transactions suffered a greater deal than woollen yarn, sea products, timber, matches, glassware, chinaware and metal goods which were then out of season.

The export trade situation, despite the boycott, recorded in total an increase during the year, as compared with the preceding year, owing to the advance by leaps and bounds of the export trade during the autumn quarter, stimulated by the Great War boom in Japan, the dearth of western products transported to China and the decline of the boycott.

Therefore, it may be said that the increase of Japan's exports during the autumn quarter was more than cover the decrease sustained during the boycott season, and recorded on the whole an increased result in 1919, in spite of the greatest boycott ever launched in China.

The export trade analysis of staple goods as compared with two preceding years follows:—(In Y.1,000)

Staple goods	Total Values		
	1919	1918	1917
Cotton yarn .. .. .	84,119	86,366	85,801
Cotton textiles .. .. .	143,284	88,048	84,804
Cotton piece goods .. .. .	1,080	1,217	1,097
Cotton underwear .. .. .	2,009	2,106	1,804
Hosiery goods .. .. .	2,384	2,288	3,107
Hats .. .. .	1,458	1,284	516
Paper .. .. .	10,274	9,576	6,354
Chinaware .. .. .	2,854	2,106	1,980
Glass and Glassware .. .. .	4,130	3,256	2,985
Umbrellas .. .. .	3,179	2,662	1,662
Toys .. .. .	481	1,059	483
Woollen fabrics .. .. .	1,871	2,082	2,349
Matches .. .. .	5,869	4,103	4,084
Tanned goods .. .. .	825	880	1,741
Copper .. .. .	14,143	9,237	6,364
Timber .. .. .	9,431	6,968	3,690
Coal .. .. .	12,840	10,872	9,736
Sake .. .. .	2,316	1,278	841
Refined sugar .. .. .	17,289	19,446	17,511
Sea products .. .. .	7,552	9,073	6,489

#### The Fifth Anti-Japanese Boycott and Trade

We can trace the cause of the fifth anti-Japanese boycott movement to the Chinese demands for the retrocession of the Kwantung Leased Territory \* and the abrogation of the Twenty-one Demands. At the Washington Conference, held in 1921, the Japanese delegation submitted a statement which reads in part as follows:—

"The only leased territory, therefore, which remains to be discussed at the conference so far as Japan is concerned is Kwantung Province, namely, Port Arthur and Dairen. As to that territory, the Japanese delegates desire to make it clear that Japan has no intention at present to relinquish the important rights she has lawfully acquired and at no small sacrifice. The territory in question forms a part of Manchuria—a region where, by reason of its close propinquity to Japan's territory more than anything else, she has vital interests in that which relates to her economic life and national safety. This fact was recognized and assurance was given by the American, British, and French Governments at the time of the formation of the international consortium, that these vital interests of Japan in the region in question shall be safeguarded.

"In the leased territory of Kwantung Province there reside no less than 65,000 Japanese, and the commercial and industrial interests they have established there are of such importance and magnitude to Japan that they are regarded as an essential part of her economic life.

"It is believed that this attitude of the Japanese delegation toward the leased territory of Kwantung is not against the principle of the resolution adopted on November 21."

While, on the part of the Chinese delegation, they insisted on the wholesale abrogation of the agreements of 1915 for the following reasons:—

1. In exchange for the concessions demanded of China, Japan offered no *quid pro quo*. The benefits derived from the agreements were wholly unilateral.

2. The agreements, in important respects, are in violation of treaties between China and the other powers.

3. The agreements are inconsistent with the principles relating to China which have been adopted by the conference.

4. The agreements have endangered constant misunderstanding between China and Japan, and, if not abrogated, will necessarily tend, in the future, to disturb friendly relations between the two countries, and will thus constitute an obstacle in the way of realizing

\*South Manchuria Railway Zone.



the purpose for the attainment of which this Conference was convened. As to this, the Chinese delegation, by way of conclusion, can, perhaps, do no better than quote from a resolution introduced in the Japanese Parliament, in June, 1915, by Mr. Hara, later Premier of Japan, a resolution which received the support of some one hundred and thirty of the members of parliament.

The resolution reads:

"Resolved: That the negotiations carried on with China by the present Government have been inappropriate in every respect; that they are detrimental to the amicable relationship between the two countries, and provocative of suspicions on the part of the Powers; that they have the effect of lowering the prestige of the Japanese Empire; and that, while far from capable of establishing the foundation of peace in the Far East, they will form the source of future trouble."

Thus the curtain of the Washington international drama fell and the consequent result was the outburst of the anti-Japanese boycott in 1923, when the Chinese expected that the lease-limit of Kwantung Province would expire. Geographically speaking, the boycott showed itself most serious in North and Central China, viz., Peking, Tientsin, Hankow, Ichang, Chungking, Changsha, Kiukiang, Nanking and Shanghai, while it was rather lukewarm in Manchuria and South China, not to speak of the South Sea Islands. The extent of the boycott of that year was greatly limited, as compared with that of 1919, while the effects thereof seemed to be more considerable. The moving spirits of the boycott were as usual professional boycott-mongers and riotous student bodies backed by the Chinese Chamber of Commerce. The feature of the boycott program was the performance of the anti-Japanese boycott drama staged in various places throughout China.

Japan's China trade which was promising in 1923 was again hampered by the boycott. The following trade analysis for the first half year shows the general situation of the trade:—

#### JAPAN'S EXPORTS TO CHINA (In Y.1,000)

	1923	1922	1921
January .. .. .	21,222	19,417	28,110
February .. .. .	19,069	24,367	22,489
March .. .. .	30,107	30,877	24,928
April .. .. .	30,147	34,509	28,419
May .. .. .	21,919	33,612	24,545
June .. .. .	18,957	30,456	19,572

#### JAPAN'S IMPORTS FROM CHINA (In Y.1,000)

	1923	1922	1921
January .. .. .	17,674	14,355	12,847
February .. .. .	18,020	12,222	11,599
March .. .. .	20,073	15,575	13,306
April .. .. .	19,099	18,410	14,722
May .. .. .	20,653	16,368	20,926
June .. .. .	22,093	14,034	19,977

The above table indicates a heavy decline in exports during the May-June quarter, while we can witness a slight increase in imports, as compared with that of the preceding year. From an economic viewpoint, it was near the fact that the anti-Japanese boycott carried out under pretext of the retrocession of the Kwantung Leased Territory and the abrogation of the Twenty-one Demands only served for the Chinese merchants who masqueraded themselves to attain their selfish ends in claiming the advancement of the domestic industry and the nation-wide use of the home products.

The increase of Japan's imports will be attributed to the fact that the Chinese merchants winked at the transaction of the Chinese raw materials destined to Japan when they thought it profitable and that the exchange quotations were favorable to the Japanese importers at home during the year. Reasons for the decrease of Japan's exports can not necessarily be ascribed to the boycott only, though it cannot be denied that the boycott was the main handicap. During the year under review, the farm crop of China was rather poor, leading to the general business depression, and the purchasing power of the average Chinese declined, owing to the unfavorable silver quotations.

That the boycott was most serious in Central China can be seen in the following statistics:—

#### JAPAN'S EXPORTS TO CENTRAL CHINA (In Y.1,000)

	1923	1922	Increase or Decrease
January .. .. .	11,424	9,968	+1,456
February .. .. .	9,758	13,405	-3,647
March .. .. .	14,836	13,059	+1,777
April .. .. .	14,237	15,908	-1,671
May .. .. .	9,642	17,814	-8,172

We shall proceed to survey the effects of the boycott on the staple goods exported to China during the boycott season. The cotton yarn is one of the most affected commodities exported. In the following trade returns for the first half year, we can see the cotton yarn suffered a remarkable decline during the April-June quarter:—

	1923	1922	Increase or Decrease
January .. .. .	4,259	3,819	+ 440
February .. .. .	2,167	4,427	-2,260
March .. .. .	6,425	7,047	- 622
April .. .. .	5,550	8,169	-2,619
May .. .. .	3,771	8,622	-4,851
June .. .. .	1,600	6,864	-5,264

It seems that the export trade of cotton yarn is tending year by year towards a gradual decline, regardless of the anti-Japanese boycott. However, during the year under review, the Chinese cotton mills seemed to have fished in troubled waters, taking advantage of the boycott.

The cotton piece goods were also affected seriously. Since the April quarter, the export of goods to China declined in great volume, recording about 153,951 pieces as a decrease during the April-June quarter of the year under review as compared with that of the corresponding quarter of the preceding year.

Other piece goods such as socks, hosiery goods, handkerchiefs, also suffered to a certain extent, while chemical products suffered heavily. Such miscellaneous articles as matches, soap, stationery, glassware, toys, tooth-powder, leather products and tyre goods were also seriously hit, being replaced by Chinese and other foreign products. Paper, beer and timber also suffered, while sea products and umbrellas which had enjoyed an established demand with no alternative foreign goods recorded a heavy decline of trade.

The following table shows the general figures of the export trade of staples as compared with those of the two years:—(In Y.1,000)

	1923	1922	1921
Cotton yarn .. .. .	23,772	38,947	27,213
Cotton fabrics .. .. .	47,341	56,237	55,065
Silk fabrics .. .. .	973	1,288	1,423
Woollen goods .. .. .	304	119	207
Hosiery goods .. .. .	237	320	333
Hats .. .. .	368	357	214
Paper .. .. .	3,783	4,046	4,758
Cement .. .. .	324	638	344
Chinaware .. .. .	714	798	554
Glass and glassware .. .. .	1,181	1,315	919
Iron manufactures .. .. .	2,539	1,792	1,627
Gumtyre .. .. .	526	1,032	561
Machine and parts .. .. .	2,631	4,494	3,617
Umbrellas .. .. .	946	1,017	780
Lamps and parts .. .. .	438	431	538
Toys .. .. .	388	313	196
Buttons .. .. .	371	291	240
Matches .. .. .	223	271	626
Soap .. .. .	816	968	540
Iron .. .. .	535	1,923	1,035
Timber .. .. .	2,062	3,002	3,280
Coal .. .. .	4,605	3,027	6,100
Beer .. .. .	306	419	493
Canned goods .. .. .	308	187	198
Refined sugar .. .. .	8,502	7,402	5,017
Sea products .. .. .	2,497	1,948	1,673

#### Conclusion

In conclusion, we shall point out, *inter alia*, the following points characteristic of the anti-Japanese boycotts:—

(1) The decrease in Japan's export trade to China in the years of the anti-Japanese boycott is amply covered, generally speaking, in the years following the boycott.

(2) It is strange that Japan's exports to China during the years of the boycott increase, roughly considered, under the category of the "unknown destination" in the export returns of Japan.

(3) Japan's exports to Hongkong during the years of the boycott generally increase.

(4) Japan's products of the cheaper quality are gradually replaced by the Chinese home products in the years of the boycott.

(5) Customs revenues of China in the years of the boycott decrease.

(6) The anti-Japanese boycott movements are quieted down prematurely, owing to the exhaustion of fanatical enthusiasm on the part of the agitators.

(7) To quote an American:—"Boycott cannot last forever. The nation under boycott this year may become the general favorite in China the next. Boycott of one nation cannot permanently



benefit another. It is foolish of anyone to believe that permanent advantage is to be reaped by any nation in China over another when the boycott is the tool."

JAPAN'S CHINA TRADE RETURNS FROM 1908 TO 1926 (In Y.1,000)

	Exports to Imports from Total		
1907..	85,619	59,182	144,801
1908..	60,506	50,966	111,472
1909..	73,087	46,886	119,973
1910..	90,037	68,569	158,606
1911..	88,152	61,999	150,151
1912..	114,823	54,807	169,630

1913..	154,660	61,223	215,883
1914..	162,370	58,305	220,675
1915..	141,122	85,847	226,969
1916..	192,712	108,638	301,350
1917..	318,380	133,271	451,651
1918..	359,150	281,707	640,857
1919..	447,049	322,100	769,149
1920..	410,270	218,090	628,360
1921..	287,227	191,678	478,905
1922..	333,520	186,344	519,864
1923..	272,190	204,678	476,868
1924..	348,398	237,543	585,941
1925..	468,438	214,657	683,095
1926..	421,861	239,410	661,271

# The Peace of the Far East

Reconciliation between China and Japan Essential to the Establishment of a Modern State in China

By George Bronson Rea

CHINA'S case is briefly but ably set forth in the current number of *Foreign Affairs* \* by one of her most distinguished statesmen and spokesmen. Dr. C. C. Wu tells us that the cardinal point in the foreign program of the new Nationalist Government is the abrogation of the old treaties and gives his reasons why they are incompatible with the full exercise of China's sovereignty and free development of her national resources by foreign enterprise. The Treaty Powers have already accepted the principles laid down by Dr. Wu as a guide to their future relations with his country and all they now ask is that the new Government demonstrate its ability to control the military leaders, provide evidence that it represents a unified nation and is able to discharge its obligations under a new set of agreements.

The attitude of the American Government and people towards China's aspirations was just as ably expounded by Dr. Stanley K. Hornbeck, chief of the Far Eastern Division of the State Department, in an address delivered at the annual meeting of the American Association of Political and Social Science at Philadelphia on May 11. America's answer to Dr. Wu's appeal for treaty revision is, as Dr. Hornbeck points out:

"The American Government waits hopefully and with good-will for the Chinese to achieve a condition of political cohesion which will enable some voice to speak with authority to and for China... There is every reason to expect that it will continue to pursue a course directed toward the protection of American lives and the conservation of American interests—a course considerate of Chinese rights and interests and aspirations."

The attitude of the American business community in China is in full harmony and accord with Dr. Hornbeck's exposition of our China policy as interpreted by the present Administration. The Republican Party stands firmly on the basic principle that protection to American lives and interests abroad, is one of the fundamental obligations of government. The key-note speech of Senator Fess at Kansas City emphasizes this fully in the following words:

"The one undeviating principle for which America will continue to stand, is protection of American citizens in their rights of lives and property wherever they may be if they have a right to be there, whether on land or sea. As was recently said by the President on the memorable battlefield of Gettysburg: 'A government that failed in its duty to protect the lives and property of its citizens would be justly condemned at home and covered with derision abroad.'"

The Republican Party reaffirmed these principles in its platform:

"The Administration has looked with keen sympathy on the tragic events in China. We have avoided interference in the internal affairs of that unhappy nation, merely keeping sufficient naval and military forces in China to protect the lives of Americans who are there on legitimate business and in still larger numbers for nobly humanitarian reasons. America has not been stampeded into making reprisals, but on the other hand has consistently taken the position of leadership among the nations in a policy of wise moderation. We shall always be glad to be of assistance to China when our duty is clear."

The last sentence carries a message that the Chinese and American friends of China should ponder over. The American Government is not always sufficiently well informed about the problems involved in any Asiatic dispute. It is not always possible to have an exact knowledge of China's secret commitments with other Powers. Our duty is not always clear. However as Dr. Hornbeck says, we have a very definite and fixed policy in regard to China;

"Co-operating with other Powers in so far as commitments and common responsibilities are concerned, independent where an issue is peculiar to

the United States and China or to another Power and China, independent where some objective is sought by another or other Powers and not by the United States, independent where there arises a question of using force for purposes other than defense and averse to any activity which smacks of aggression."

\*An American Quarterly



Dr. C. C. Wu





Harris &amp; Ewing

Hon. Frank B. Kellogg

Dr. Hornbeck's analysis of American policy is of special interest at this time when Japan's attitude towards Manchuria provides the Chinese with the opportunity to reopen the controversy over her rights in that territory. This, as Dr. Wu points out, is the real crux of Sino-Japanese relations. The Chinese insist that Japan's rights under the 1915 treaties are invalid. Japan stands firmly on the legality of that instrument. Neither side will yield to the other. Dr. Wu is the first Chinese diplomat who has had the courage to suggest that the issue can be solved along peaceful and economic lines, implying that Japan's railway, mining, industrial and commercial interests in Manchuria should be recognized under guarantees that these rights will be protected by China. The two concluding paragraphs of his article expressing the hope that a solution be found along economic lines is sane, commendable and statesmanlike, one that will appeal to all fair-minded people.

Unfortunately, however, the issue is not one between China and Japan alone. Dr. Wu overlooks the equally important strategic angle to the problem arising from Russia's position in North Manchuria and her protectorate over Outer Mongolia. Before Japan can even consider the Chinese viewpoint, the status of Outer Mongolia should be definitely determined, for not only has it declared its independence of China but is now under a Soviet form of government and under Soviet protection, a constant menace not only to China but to Japan's position in Korea and South Manchuria. In any discussion involving the territorial integrity of China, the status of Tibet and Mongolia assumes an importance equal to that of South Manchuria.

As one of the signatories to the Washington Treaties, Japan will respect China's sovereignty. If Japan is assured of her economic rights and privileges in South Manchuria and permitted to develop this territory in co-operation with Chinese and foreign capital under the Open Door principle and under guarantees which preclude the enactment of confiscatory legislation or prohibitory export regulations, a peaceful solution to the Manchuria problem is possible, but so long as the Chinese accept the accomplished fact in Mongolia, acknowledge the Soviet rights in North Manchuria and concentrate

their diplomacy and propaganda against Japan in South Manchuria, it is inconceivable that Japan will consent to any weakening of her present strong position.

It is to be expected that until such time that China is strong enough to defend her neutrality in Mongolia and Manchuria that Japan will assume the right to protect her investments and strategic position in South Manchuria. The Chinese may call this a "protectorate," but as Mr. Y. Matsuoka, vice-president of the South Manchuria Railway, says: "*you can call it anything you like, will not change Japan's determination to protect the lives and properties of her nationals and preserve the peace of Manchuria. Manchuria is our first line of defense.*"

Mr. Matsuoka speaks for Japan. His blunt statement may be undiplomatic and provocative; it may sound like a challenge to China, but it faithfully reflects the determination of all parties in Japan to maintain their present rights in Manchuria. Americans may deplore such an outspoken pronouncement of policy, but no responsible Japanese official can forget that the Chinese Delegation at the Washington Conference reserved the right to reopen the Manchurian question and seek a solution on all future appropriate occasions. They have since been told by spokesmen for China that the issue will be contested by force as soon as China is strong enough to impose its viewpoint. Adhering to this program, both major factions in China recently protested against an American loan to the South Manchuria Railway on the grounds that Japan's rights to the railway were invalid. Thus, a very definite issue has been created, one which unless handled with extreme delicate diplomacy, may produce an explosion.

Somewhere in the archives of the State Department reposes the report of General Leonard Wood's round-table conference with the military leaders of Japan, held in Tokyo in September, 1921. In that frank exchange of viewpoints between the fighting men of both nations, both sides presented and discussed their irreducible minimum for peace. General Baron Tanaka, who headed the Japanese delegation, told General Wood that Japan would go to war if any nation interfered with her position in Manchuria. He also outlined



Mr. Y. Matsuoka, Vice-President of the South Manchuria Railway



the conditions upon which Japan would attend the Washington Conference. The Conference was held and recognized the *status quo* in Manchuria based on the 1915 treaties, China alone voiced a protest and stated her intention to reopen the issue at some future date. Clearly, the issue is one between China and Japan, one in which no other nation has the right to intervene unless the Nine Power Treaty is violated.

In view of President Coolidge's clear cut declaration of American policy for the defense of American lives and properties abroad, which was more forcibly expressed by Ex Secretary Hughes in his Princeton lectures on "America's Right to Intervene" and incorporated as a vital plank in the Republican Party platform, Americans are hardly in a position to criticize or condemn Japan for applying the same principle in a territory where her economic and strategic interests predominate. The position of Japan in Manchuria is identical in every respect to that of the United States in Cuba, without the Platt Amendment. We compelled Cuba to recognize our right to intervene in her internal affairs as the price of her nominal independence. America's self-assumed right to intervene in the affairs of the other Caribbean countries, rests firmly upon our determination to resort to extreme measures to defend the approaches to the Panama Canal and our future canal route through Nicaragua. It may outrage, as it does, the sensibilities of our Latin American neighbors, but we place our own security first. In the same way Great Britain asserts her right to intervene anywhere in the Near East from Egypt to the Persian Gulf. In protecting the approaches to her Indian Empire she has also affirmed her right to neutralize Tibet into a buffer-state against the menace of Russia.

American rights in Panama and Nicaragua are somewhat analagous in principle to Japan's in Manchuria. The United States controls a narrow strip of territory cutting right through the heart of two independent Latin American republics whose sovereignty we respect in all other matters and will fight to maintain against any and all foreign aggression or intervention. The strategic menace confronting the United States in the Caribbean is distant and somewhat problematical while the menace to Japan in Manchuria is immediate and uninterrupted. Constant vigilance in Manchuria and Mongolia and a preparedness to resist the first signs of aggression from the North is the price of Japan's continued security and independence. As the United States will fight at the drop of the hat to defend her position in the Caribbean, so will Japan, with greater justification, fight to maintain her position in South Manchuria, not because she harbors any ulterior designs upon China's sovereignty or territorial integrity but to preserve those vital economic and strategic advantages upon which her existence as a nation must depend until such time as China herself can guarantee that Russia will never again menace her independence by violating the independence of China.

Explaining America's foreign policy under Republican Administrations in the recent issue of *Foreign Affairs*, Ogden Mills says:

"We recognize the equality of all the American Republics and that, as sovereign powers, all enjoy equal rights under the law of nations. But sovereignty carries with it certain obligations and among these is the duty of each State to protect the rights which the nationals of other States have acquired within its territory in accordance with its laws. It is, therefore, the obvious policy of the United States to encourage stable governments throughout the Western Hemisphere, so that the rights of foreign citizens, acquired constitutionally, shall not be endangered by political upheavals and revolutions. We cannot under these circumstances forego the right to protect, under well established rules of international law, the rights of our citizens, nor can we afford to allow other nations to

interfere in the affairs of this Hemisphere under the pretext of protecting the rights of their nationals. We shall not seek to evade these responsibilities; but at the same time we expect on the part of others a recognition of our position and a fair and unbiassed interpretation of our actions. A case in point is Nicaragua. Obviously we could not do less than to send troops there when American lives were in danger and the situation had gotten beyond control of the local authorities. In such a situation, the right and duty of intervention are so well established under international law that for the United States to avoid its responsibilities would be a derogation of its sovereignty."

Change the name of the American spokesman for the Administration for that of some equally prominent Japanese official expounding the official Japanese viewpoint and, substituting Manchuria for Nicaragua or any other Latin American country, the argument had equal force and legitimacy. As to how Japan and the United States acquired jurisdiction over strips of territory in independent neighboring states, a further comparison would indicate that in the methods employed, Americans are hardly in the position to throw bricks at Japan. The story of the acquisition of the Canal Zone and the intrigues leading up to the signing of the Chamorro-Bryan Treaty ceding to the United States the canal rights through Nicaragua, read like a page from Far Eastern history during the Battle of Concessions in 1898. Japan, at least fought two wars to acquire the rights she now precariously enjoys in Manchuria, both wars forced upon her by China.

Under the terms of a secret treaty of alliance, Li Hung-chang surrendered China's sovereign rights in Manchuria to Russia in order that the armies of the Czar might attack Japan and wipe out the humiliation of his defeat in 1895. Russia double-crossed her ally and converted Manchuria into a viceroyalty governed from St. Petersburg. Japan fought one of the bloodiest wars of modern times to defend her independence and restored to China her sovereignty over a territory that by all recognized laws of warfare and equity she had fairly forfeited. That Manchuria was once more brought under Chinese sovereignty is due solely to Japan's sacrifices. Had Japan known of the existence of the Li-Lobanoff secret treaty of alliance at Portsmouth, there would have been no question to-day over her rights in Manchuria. A great and terrible wrong was inflicted upon Japan by China. The record stands. The evidence cannot be waived aside as unimportant. The manly, noble and

dignified thing for China is to recognize these historical facts, for, unless these truths are frankly admitted by China, there is little hope of any peaceful solution to the Manchurian problem. Japan will never consent to even discuss her rights in Manchuria with China or permit the controversy to go before the League of Nations, the World Court, or the mediation of any third party. As long as Russia is entrenched in North Manchuria and holds sway in Mongolia and China is too weak to assert her authority or sovereignty in these regions, no other nation can fairly question Japan's right to apply principles for her protection that are found essential to the security of the other great Powers in other parts of the world.

Japan is just as honest in her policy towards China as is the United States towards her immediate neighbors to the south. Above everything else, Japan desires the friendship and co-operation of China. That policy is basic and fixed. In applying it, Japan's plan of action and methods may not at all times seem to fit in with the main objective, but it is difficult for any government to adhere rigidly to a policy when unforeseen circumstances arise to compel a temporary deviation from the fixed program. The United States is finding this out in Latin America. The most important task that confronts the statesmen of the world is to bring about a reconciliation between China and Japan in order to lay firmly the foundation of a



Baron Giichi Tanaka, Premier and Foreign Minister



lasting peace in the Orient, upon which a modern Chinese state can be erected. As long as there exists the possibility of a war between China and Japan over Manchuria, it is hopeless to expect American capital to interest itself in the reconstruction of China. Especially is this so, if the Consortium principle is to govern foreign investments in China. America desires peace in the Pacific, peace in the Far East, peace in Asia, peace throughout the world. All our diplomacy is concentrated upon ushering in a new era of good understanding between the nations. America wants to assist in developing the resources of China as an outlet for our capital and commerce. We cannot do this safely when the question of Manchuria remains an open irritant menacing the friendly relations of China and Japan.

The American Government recognizes Japan's rights to the South Manchuria Railway and the Liaotung Lease, although these rights are disputed by China. Until such time as Japan provides evidence that she has violated the Nine Power Treaty, the American Government cannot fairly question her intentions, and as long as she confines her activities to the maintenance of peace in Manchuria and the protection of her nationals and their vested interests, it is safe to say that American opinion will sympathize with her. American opinion will not sympathize with Japan if Chinese sovereignty over Manchuria is further impaired. Interpreting American policy, Secretary Kellogg recently declared that the United States has always considered Manchuria as an integral part of China and despite historical arguments that could be advanced to prove that China belonged to Manchuria; that the Chinese were prohibited from settling or colonizing the lands of their conquerors; that the real capital of the empire under the Manchus was Fengtien, where all the archives and records of the dynasty are preserved; that the homeland of the Manchus became part of the Republic under a very definite contract that has since been violated; this viewpoint of the status of Manchuria will prevail in the United States. But, the same logic and reasoning must extend to all the territory that the Republic fell heir to on the abdication of the Manchus. Mongolia and Tibet are equally integral parts of China. There is no record that the American Government protested against Britain's virtual declaration of a protectorate over Tibet, nor has it officially remonstrated against the rape of Mongolia. The "Roof of the World" is simply a buffer-state created by British diplomacy to protect India against the menace of Russian aggression. The creation of a Mongolian Republic under the protection of Moscow, constitutes a menace that equally justifies Japan in adopting a similar policy in Manchuria and with greater reason, as Japan has already had to pay for China's inability to defend her own sovereignty and neutrality.

Aside from a re-declaration of its policy, the American Government cannot fairly protest or object to any steps that Japan may take to defend herself against the "menace from the director of Urga," even though in so doing, she may seem to impair the sovereignty of China. The come-back of Russia in Eastern Asia and all the woes that have since befallen China as a consequence of Russian interference in her affairs, can be traced directly to America's insistence that Japan evacuate Siberia and North Manchuria and surrender to the Consortium her rights to the Taonan-Jehol Railway. We cannot always expect Japan to accept the American viewpoint and surrender a principle that other self-respecting governments invoke when their own security is imperilled by the backwardness, incompetence, duplicity or weakness of a neighboring state. Until China's sovereignty is fully restored in Mongolia and Northern Manchuria it is futile to expect Japan to surrender her present strategical advantages which guarantee her against aggression.

If China was strong enough to impose her authority in Mongolia and North Manchuria it would be easy to arrive at some amicable understanding with Japan along purely economic lines without importing political considerations into the controversy. Until China arrives at this point, her weakness will justify Japan in stressing the strategical importance of Manchuria as an unanswerable reason why her troops should remain in the Railway Zone. Despite Dr. Wu's fears, Shantung will never become the Alsace-Lorraine of Asia. Japan will adhere religiously to her commitments under the Nine Power Treaty and recall her troops just as soon as the menace to the lives and properties of her nationals has passed. Her re-occupation of Tsingtao, Tsinan and the Railway Zone are merely passing incidents, that can be settled without loss of dignity by either side. Manchuria is different. The future status of this territory will depend very largely upon China's attitude at this

moment. There is no indication that Japan will interfere with the political status of this territory. It may be accepted that Japan recognizes that Manchuria is an integral part of China but she will never permit the civil warfare which has devastated China Proper to destroy its present prosperity. If the Nationalists insist upon forcing the issue, Manchuria may well become the Alsace-Lorraine of Asia. Japan has a strong case, one which bears such a close resemblance to America's self-assumed right to intervene in the Caribbean, that public opinion in this country would be inclined to a strict neutrality.

There is increasing evidence that the Chinese are beginning to appreciate Japan's attitude in Manchuria. The way is being cleared for an amicable solution to this perplexing problem. Sino-Japanese reconciliation can be attained only by a frank and honorable avowal on the part of China of her responsibility for the Russo-Japanese war and a willingness to indemnify Japan for her sacrifices. There is no reason to assume that Japan would demand any further alienation of China's territory or impairment of her sovereignty or administrative independence. There is every reason to believe that Japan is willing to let bygones be bygones and accept China's proffered hand of friendship. No useful purpose can be served at this time by reopening old sores, re-examining old grievances or discussing historical facts. The realities of the problem should be faced. In their blind hatred of Japan, the Chinese observe May 7, the date of Japan's ultimatum in 1915, as a "National Humiliation Day," whatever that may mean. They do not go behind this date. They fail to understand that the Battle Monuments that dot the Manchurian landscape from Port Arthur to Mukden are the emblems of a great sacrifice that their former corrupt Manchu rulers forced upon Japan. These memorials are a constant reminder to the Japanese of China's weakness and duplicity. As they stand or kneel in reverent homage before these holy shrines, the Sons of Nippon give thanks to their heroic dead that the flag of the Rising Sun still floats over their beloved Homeland. Had they failed, the Japanese of to-day would be holding their own day of National Mourning ringed around with Russian bayonets and China herself would long ago have taken her place in the congeries of Asiatic satrapies ruled from Moscow. As long as the Chinese refuse to recognize the facts of history and continue to harp on the Twenty One Demands, the invalidity of the 1915 treaties and announce their determination of ousting the Japanese from Manchuria by force, a peaceful solution to the problem is difficult. Dr. Wu has sounded a note that commands attention. If it leads to a better understanding with Japan and makes for ultimate co-operation and peace it would be a brilliant victory for Chinese diplomacy. Japan has made many sacrifices in the past to gain and retain the friendship of China. She will make further sacrifices to cement this friendship. It remains only for China to meet her half way.

## Foreign Relations of the Chinese Nationalist Government\*

By Dr. C. C. Wu†

The foreign policy of the Nationalist Government of China, as enunciated by Dr. Sun Yat-sen and set forth in the program of the Nationalist Party (the Kuomintang) is clear and definite. It may be summarized in a few words: "China seeks, not merely in name but in fact, the status of absolute independence and equality in the family of nations. She will regard as real friends only those Powers who treat her as an equal and respect her rights."

There is nothing very startling in this policy. It is substantially the same policy that every independent and sovereign state has adopted and is adopting in its relations with other states, and is a natural corollary of the accepted principles of international comity. For nearly a century China has been subjected to an inferior status, through unilateral treaties imposed upon her in defeat or in ignorance, and that makes her present struggle to be mistress in her own house seem to some people revolutionary or anti-foreign. The

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rights and interests of foreigners in China such, for example, as would be enjoyed by Americans in England, will be amply recognized and protected under the foreign policy of the Nationalist Government. Only interests which are in the nature of privileges and which have grown up under the régime of extraterritoriality since 1842 will be affected adversely. All these China avowedly intends to abolish as being incompatible with the full exercise of her sovereignty.

The unequal treaties are no longer suited to conditions in China. They are an obstacle in the path of her national progress. They complicate and endanger the friendly relations China endeavors to maintain with all foreign states. Their abrogation will benefit not only Chinese but even foreigners themselves, in spite of the hue and cry that will be made by a few "die hards."

In the first place, a new impetus will be given to the economic development of China, and in particular to her development with the aid of foreign co-operation. Nationalist China welcomes foreign investment and foreign enterprise in China. Dr. Sun is the author of a book, "The International Development of China," which, as its title indicates, advocates the development of the country's vast natural resources with the assistance of foreign capital and foreign expert knowledge. But if a foreigner, wherever he travels in China, is not amenable to the laws of the country, and, what is more, if the immunity which his person enjoys can spread like a mantle and cover his residence, his goods, and even things with which he comes into contact, then no one will be surprised if not much business is done. Thus, under the treaties, foreign enterprise has been restricted within specified small areas. While the foreigner enjoys great privileges, he is also subject to disabilities, although the latter affect less the foreigner in China, who has probably enough business to occupy him in the open ports, than the foreigner at home, who probably would like to have newer and larger markets for his products. When foreign privilege has been abolished there will be no longer any reason to limit the scope of the foreigner's enterprise, and international co-operation can be invited in opening up the whole of China.

Secondly, the readjustment of treaty relations will provide better protection for foreigners. At present foreign rights and privileges depend upon treaty safeguards and in spite of the fact that they are very often from their very nature unenforceable, frequent appeals are made to foreign governments to endeavor to secure their enforcement. If no attempt is made to enforce them, foreign "prestige" is lowered. If an attempt is made to enforce them, ill-feeling is created. This dilemma has been recognized, though somewhat tardily, by some of the Powers, and their spokesmen have declared that they will not insist upon a literal interpretation of treaty rights. The failure of the gunboat policy is gradually being realized. And even where there are big guns, they cannot compel the Chinese to buy the foreigners' goods. The economic weapon is one to which industrial nations are particularly vulnerable. It would be far better for the antiquated and unenforceable treaties to be scrapped altogether in favor of suitable new ones. Then foreigners would possess rights and interests which had been accorded to them freely and willingly by the Chinese; they would be more adequately protected in these rights and interests by China's honor and China's goodwill than by any number of battalions and gunboats.

A third consideration is that the present treaty system, bound up as it is with ill-will, jealousy and intrigue between nations, is a constant menace to the peace of the Far East. On one side are the Powers, anxious to maintain their privileges and interests, desirous whenever occasion offers to extend them, and at the same time jealous one of the other. On the other hand stands awakened China, impatient to shake off the shackles of the past and eager to regain her freedom. Such a situation is fraught with great dangers. The recent events in Shantung and the clash between the Nationalist and Japanese troops show that the dangers are not exaggerated. With the abrogation of the system a disturbing factor to the peace of the Far East and of the world will be removed.

A few lines should be devoted to Nationalist relations with Russia and Japan, China's two closest neighbors. Relations with Russia have been broken off due to the fact that Russia engaged in a program of interference in China's domestic concerns. When Soviet Russia voluntarily relinquished treaty rights secured under the Tsarist régime and demonstrated her sympathy for the Nationalist cause, there arose naturally a bond of friendship between Nationalist China and Soviet Russia. Later, however, it was

discovered that the Communists, directed from Moscow, were engaged in propaganda incompatible with the principles of the Kuomintang. This caused an expulsion of those Communists who had gained admission to the Kuomintang. Last December in the city of Canton there was an uprising of a small group of Communists who, taking advantage of the absence of the garrison, gained control of the city for three days, during which much suffering was caused to the population. Evidence was found which implicated the Russian Consulate in Canton. On account of this, Russian Consulates in Nationalist territory were closed and the activities of Russian state enterprises were restricted. But there is no reason why the rupture of relations need be indefinitely continued. So soon as Soviet Russia gives evidence that she will not meddle in the internal affairs of China, the Nationalist Government is ready to resume relations with its closest neighbor.

China's relations with Japan are at present of interest to the whole world. After the notorious Twenty-One Demands of 1915 and the award of Shantung to Japan, relations between the two countries were strained. Since 1922, however, as a result of the withdrawal of Japanese troops from Shantung after the agreement reached at Washington, matters improved. Furthermore, the Japanese Government of the day followed a policy of conciliation *vis-a-vis* China, and this was duly appreciated by the Chinese people.

In April, 1927, however, the Cabinet fell and Baron Tanaka, leader of the military group which favored the Twenty-One Demands of 1915, came into power as Prime Minister and Minister of Foreign Affairs. His assumption of office was marked by the announcement of the abandonment of his predecessor's policy and the inauguration of a "positive policy" toward China. Shortly afterwards, when the Nationalist forces marching on Peking entered the province of Shantung, he dispatched troops to Tsinan, its capital, on the excuse of protecting Japanese residents there. It was the official duty of the writer, as Minister of Foreign Affairs of the Nationalist Government, to protest against this infringement of China's sovereignty and to state that should any untoward consequences arise from this illegal and provocative act, the Japanese Government must shoulder the responsibility. The Japanese troops were later withdrawn without any serious incident.

This year, when Nationalist forces again approached Shantung in their effort to gain control of Peking and unite the country, the Japanese Government repeated its maneuver, and a similar protest was addressed to the Japanese Government. The very event for which warning was given last year took place. The Tsinan clash between Nationalist and Japanese troops is too recent to need narration. Regardless, for the moment, of the controversial questions of the immediate responsibility for the incident, for "war guilt" and "war atrocities," the fact remains that the Japanese and Chinese soldiers clashed on Chinese territory. If we were to admit the right of any Power to send troops to protect its nationals anywhere they may happen to be in China, then China would soon be overrun by alien armies and the independence and territorial sovereignty of China would become a mere farce. If Japan, on the plea of protecting a thousand or so nationals (mostly small shopkeepers who if apprehensive of danger can easily be evacuated) residing 260 miles inland, can send two to three thousand troops there regardless of China's rights, what is there to prevent another Power from sending twenty thousand troops a thousand miles into the interior to "afford protection" to half a dozen of its nationals?

But the crux of Sino-Japanese relations is to be found in Japan's pretensions in Manchuria. Japan has economic interests in Manchuria. She has need of Manchuria's resources and raw materials. But from that it is a far cry to a virtual assumption of a protectorate over the three provinces. The recent announcement that Chinese troops, whether northern or southern, are not to be admitted to Manchuria, coupled with the fact that Japanese troops are being dispatched there in increasing numbers—all this, be it remembered, in admittedly Chinese territory—is, to say the least, startling.

If Shantung and Manchuria are not to become the Alsace-Lorraine of Asia, a solution of the problem must be found. If relations between China and Japan are not adjusted to their mutual satisfaction, the peace of the world is not secure. If Japan's problem is economic, the solution should be economic, without importing into it political consideration. May not future statesmanship find an answer to these vexed questions along economic lines?



# China and American Foreign Policy

By Stanley K. Hornbeck, Ph. D., Chief of the Division of Far Eastern Affairs, Department of State

Address delivered at Annual Meeting of the American Academy of Political and Social Science, Philadelphia, May 11, 1928

IT is only fair that they who undertake to condemn or to praise make it first their business to know the facts.

Probably the most common error made by those who study foreign policy is that of failing to distinguish between *policy* and *plan of action*, then between *plan of action* and *detail of action*, and finally between various forms of real or apparent *action* and of real or apparent *inaction*.

*Policy* relates to a major objective. It proceeds from fundamental concepts or principles. Thus, the American people generally speaking believe that politically organized nations are entitled to independent national existence, and the American people generally speaking are opposed to international aggression and conquest. Out of this feeling there have sprung doctrines, and upon the foundation of doctrines there have been developed policies.

A *plan of action* relates to method. It must take account of principles and of policy, but it is not, as are they, fundamental. Principles of national action derive from the temperament and thought of the nation. Policies are determined in large part by the needs—which may be spiritual or material or both—of the nation. Plans of action must be made by individuals or groups. They must be made in reference to particular circumstances, conditions, or situations. They may involve a program, worked out with elaborate study and meant to require years for its achievement; or they may consist of no more than a decision made almost on the spur of the moment in the presence of an unforeseen, perhaps an unforeseeable situation.

A *detail of action* is a particular step at a particular moment.

*Action*, real or apparent, may be deliberate and determined or may be accidental and forced. *Inaction*, real or apparent, likewise may be deliberate and determined or may be accidental or forced. It may require just as much thought, involve just as much effort, call for just as much will power and demand just as much courage to stand still as to move.

The temperament and the needs of a people determine in large measure their activities. The activities of a nation have their political, their economic and their cultural aspects. The American people have been very busy for three centuries with problems relating to the creation and maintenance at home of an independent state and a free citizenry. Agriculture, transportation, mining, manufacturing, education and trade have been their chief concerns.

American foreign policy in general has been shaped by the belief of the American people that free states should remain free and should be encouraged to develop peacefully along their own lines.

In the realm of formulated effort the principal major objective of American policy since the earliest days of the Republic has been to ensure for American nationals and for American trade equality of opportunity, what is technically known as most-favored-nation treatment, in every country to which American citizens, American ships, and American goods have gone.

The American Government has a China policy, based on well-established principles. In broad outline, the foundations of this policy were laid a long time ago.

American interest in China has been chiefly commercial and cultural. To China from America there went first merchants; second, missionaries. At the outset the objective of American governmental policy in regard to China became that of ensuring for American nationals equality of opportunity.

In the treaty which Cushing concluded, equality of treatment was promised by China to the United States; the tariff provisions which had already been agreed upon between Great Britain and China were accepted; and extraterritorial jurisdiction was provided for; yet respect for China's rights and interests was shown in the express provision that "citizens of the United States who shall attempt" to smuggle or to trade in contraband articles should be "subject to be dealt with by the Chinese Government without being entitled to any countenance or protection from that of the United States."

As in the preceding British treaties, the provisions with regard to the tariff and extraterritoriality were unilateral, but it needs to be taken into consideration—which it seldom seems to be—that all of the Far Eastern treaties of that period were concluded with a view to regulating contacts on Oriental, not on Occidental soil. The West went to the East; for a long time the East did not reciprocate; there was, therefore, in those early days no occasion for and probably little thought of "reciprocity."

In 1853 Humphrey Marshall, American Commissioner to China, took the position "... that the highest interests of the United States are involved in sustaining China. . . rather than to see China become the theater of widespread anarchy and ultimately the prey of European ambition;" and, later, "it is my purpose to perform, punctiliously, every obligation assumed by the United States under the treaty, and to refrain from embarrassing the public administration of Chinese affairs by throwing unnecessary obstacles in the way." The American Government became of the same mind; its conscious and expressed policy became that of respecting China's sovereignty and helping the Chinese authorities to maintain the political and administrative integrity of the Empire.



Dr. Stanley K. Hornbeck



In 1868 in the treaty which Burlingame and Seward drafted, it was reiterated that the sovereign rights of China must be respected and the principle of equal opportunity for all nations to compete "in trade or navigation within the Chinese dominions" should be observed—in accordance with, but not beyond, "the treaty stipulations of the parties." In that treaty—it should be noted—there were included several completely reciprocal provisions. Later, in 1880, and again in 1903, the United States entered into treaties with China in which there appear certain reciprocal provisions.

It remained for John Hay to formulate in 1899 the doctrine that, in reference to their "spheres of interest" in China, the Powers should follow, with regard to each other, the principle of equality of opportunity, in regard to commerce and to suggest in 1900 that the Powers pledge themselves to respect China's territorial and administrative entity. The Hay Notes and the replies thereto committed the United States and several other Powers to a *course of self denial and restraint*.

At the end of another decade, Philander C. Knox proposed international co-operation in regard to the Manchuria railways, with a view not alone to making effective the principle of equality of opportunity but to averting conflicts in and with regard to that region.

The Wilson Administration withdrew the support of The American Government from the American Banking Group in the International Consortium because it felt that the conditions of the loan which was proposed would impair the administrative independence of China. Later it approved of American participation in the new Consortium because it felt that only by co-operative action could the American Government exercise among the Powers an effective restraining influence.

At the Paris Conference, President Wilson labored hard over China's case. He failed to break the arrangement with regard to Shantung which had been concluded two years earlier among four other Powers. But the American Senate and the American people stood with China; and at Washington in 1922, agreements were arrived at between Japan and China whereby the "lost rights" in Shantung were restored to China.

At the Washington Conference, with the American Government playing a leading part, the principal Powers concerned (including China) committed themselves for the first time to formal multilateral agreements in which were combined pledges with regard to equality of opportunity in China, respect for China's sovereignty, and non-interference in China's domestic affairs,—and in these agreements the underlying principle was that there should be *co-operation* in a course, some details of which were specified, of forbearance, self-denial and restraint.

Twenty years earlier, Great Britain, the United States and Japan had assented to there being made an increase in China's tariff rates—on pledge of the abolition by China of the system of internal duties known as *likin*; and to the relinquishment of extraterritorial rights, when satisfied that the state of China's laws and arrangements for their administration and other considerations should warrant.

At the Washington Conference there were concluded agreements intended to hasten action with regard to these matters.

Despite the desire of the United States that the special conference called for by the Washington Treaty relating to the Chinese Customs Tariff should be convened at an early date, three years went by before the last of the Powers signatory to the Washington treaties deposited its ratification of the Treaty concerning the Chinese Customs Tariff. Then the Chinese Government asked for the assembling of that Conference. On September 4, 1925, the Powers sent Identical Notes to the Chinese Government. In its participation in this Note, the American Government said: "... The United States is now prepared to consider the Chinese Government's proposal for the modification of existing treaties in measure as the Chinese authorities demonstrate their willingness and ability to fulfill their obligations and to assume the protection of foreign rights and interests now safeguarded by the exceptional provisions of those treaties."

Two days earlier (September 2, 1925) Secretary Kellogg had stated in a speech at Detroit the principles of the China policy of the American Government, as follows: "In brief, that policy may be said to be to respect the sovereignty and territorial integrity of China, to encourage the development of an effective stable government, to maintain the Open Door or equal opportunity for the trade of nationals of all countries, to carry out scrupulously

the obligations and promises made to China at the Washington Conference, and to require China to perform the obligations of a sovereign state in the protection of foreign citizens and their property."

The American delegates went to Peking with full powers to negotiate a new treaty, that should recognize China's full tariff autonomy. At Peking they did their utmost to carry out the spirit of its liberal instructions. Early in the conference the American Delegation proposed that China should be authorized to collect the specified surtaxes at once and announced that the United States was prepared to proceed immediately with the negotiation of a treaty that should provide for the abolition of *likin* and give China tariff autonomy; and it persisted in the hope that an agreement would be reached until, in July, 1926, the Nationalist Government at Canton served notice that it would recognize no engagement which might be entered into by the Peking Government.

During the same period, the Commission on Extraterritoriality, also provided for in the Washington Conference agreements, pursued its investigation of the laws and administration of justice in China. The American member of the Commission took a leading part, as Chairman, in drawing up suggestions and recommendations as to steps which should be taken both by China and by the Powers toward producing conditions which would warrant the Powers in giving up their rights in this connection.

In the Spring of 1926 the Chinese Government that was a party to the negotiations and the investigation went out of existence. Since then no authority has appeared able to speak for the Chinese nation as a whole. Yet the American Government has stood ready to continue the process of treaty readjustment whenever such an authority appears, or even to negotiate with a body of Chinese delegates, if they represent the nation. An official announcement to that effect was made by the Secretary of State on January 27, 1927.

In that statement of the American Government's position, Secretary Kellogg said: "The United States is . . . prepared to enter into negotiations with any government of China or delegates which can represent or speak for China . . . The Government of the United States . . . is ready . . . to continue the negotiations on the entire subject of the tariff and extraterritoriality or to take up negotiations on behalf of the United States alone."

With regard to the general attitude of the Government, Secretary Kellogg said:

"The Government of the United States has watched with sympathetic interest the nationalistic awakening of China and welcomes every advance made by the Chinese people toward reorganizing their system of Government.

"During the difficult years since the establishment of the new régime in 1912, the Government of the United States has endeavored in every way to maintain an attitude of the most careful and *strict neutrality* as among the several factions . . . The Government of the United States expects . . . that the people of China and their leaders will recognize the right of American citizens in China to protection for life and property during the period of conflict . . . In the event that the Chinese authorities are unable to afford such protection, it is of course the fundamental duty of the United States to protect the lives and property of its citizens . . . This Government wishes to deal with China in a most liberal spirit . . . It desires, however, that its citizens be given equal opportunity with the citizens of the other Powers to reside in China and to pursue their legitimate occupations without special privileges, monopolies or spheres of special interest or influence."

Such was the statement of the American Government's views in January, 1927. Such would be a statement of its views to-day.

Six months before that statement was made, the Nationalist armed forces had started northward from Canton. At that moment, they were advancing upon and threatening to seize Shanghai. In February, 1927, Secretary Kellogg proposed "that the International Settlement at Shanghai be excluded from the area of armed conflict," and declared that, "The American Government will be ready for its part to become a party to friendly and orderly negotiations properly instituted and conducted regarding the future status of the Settlement."

As it became evident that there existed in China no governing authority which could guarantee to foreigners in certain areas either protection *in situ* or safe-conduct to places of security in China or to points of departure from China, various foreign governments, the American Government among them, dispatched to



Chinese ports armed forces for the protection of their nationals. Several Governments asked or ordered their citizens to come out from points in the interior. The American Government has no means of compelling American citizens to come out, but it has done everything possible to persuade them to withdraw from perilous neighborhoods and it has provided them in many cases with transportation facilities.

The Secretary of State declared that, "American diplomatic and military representatives in China are co-operating fully with other foreign representatives *when faced with a joint problem* such as protection of the lives and property of their nationals." The President stated that our troops would co-operate with other foreign troops for the specifically limited purpose of protecting American lives when co-operation would promote that end; but that there would be no "Unified command."

On March 24, at Nanking, while northern troops were evacuating and Nationalist troops occupying the city, attacks on foreigners and foreign property were made by soldiers identified as belonging to the Nationalist army. Six foreigners were killed, several were wounded and many were abused. Foreign consulates were looted. Forty-eight foreigners assembled in the "Socony" Compound were attacked. When the premises were about to be rushed, the American consul asked by signal that the gunboats in the river fire. American and British gunboats laid with mathematical precision a barrage which dispersed the attackers and covered the escape of the besieged party over the city wall. The patience of the Consul all that day, his resolution at four o'clock, and the prompt response of the gunboats appear to have been all that saved this party—men, women and children—from death.

The Legations of Great Britain, the United States, Japan, France and Italy promptly presented to the Nationalist authorities demands for protection of foreigners, for apologies and for reparations. These demands not having been fully complied with, the contention was advanced in some quarters that the time had arrived for a joint demonstration of a forceful character. The American Government declined to adopt that view, and the demonstration was not made.

During the year which has followed, the problem of safeguarding the lives and interests of their nationals has occasioned the major foreign governments great solicitude. The difficulties have arisen mainly from the passing of control in China from the civilian authorities into the hands of innumerable military leaders. The latter, engaged in desperate warlike struggles, have levied on foreign commerce all manner of regional taxes without regard to regularity or to the capacity of the trade to bear them. Means of communication have been commandeered, merchandise and real property have been seized, and peaceful foreign nationals engaged in lawful pursuits, commercial, educational and religious, have been placed in peril or been forced to flee from their homes and places of business. Banditry has been prevalent over large areas.

It has been encouraging to note that in all this it has not appeared that the Chinese people themselves desire to sever their relations with the people of foreign countries. China's total foreign trade has not fallen off materially. In many cases, educational and religious projects established by foreigners have been carried on by the Chinese staffs, in the enforced absence of the foreigners concerned therein.

With all these facts in mind, the American Government has refrained from the use of harsh measures for the strict enforcement of treaty rights. It has hoped, and it still hopes, that the manifest advantages to the Chinese of the activities of American citizens in China will lead to the restoration of conditions more favorable to their presence than are those which now prevail.

Nevertheless, while thus scrupulously respecting the right of the Chinese to settle their own internal disputes and shape their own political future, the United States has in some localities utilized its armed forces for the protection of American lives and interests. This it has done only when peaceful measures have been exhausted and when not to have done so would have been to encourage selfish and lawless forces and to disregard its duty toward American citizens abroad. American officials in China have been tireless in their efforts to apprise their fellow nationals there of dangers that have threatened them and to assist them, whether at their places of residence or in transit to places of safety. Injuries and losses to Americans from the state of disorder in China have been considerable, but they have been mitigated by every means at the disposal of the American Government and consistent with the policy of the

United States. Lists of property perforce abandoned or lost have been compiled and, when warranted, restitution or suitable compensation has been and will be demanded. Arbitrary and unjust taxation has been protested against and when possible alleviated.

Back in the year 1924 when during the hostilities between Wu Pei-fu and Chang Tso-lin in the province of Chihli it became necessary for the foreign garrisons to arrange for special defense of their nationals at Tientsin, each garrison was assigned a section of the line of defense. To the American garrison was assigned the section on the right bank of the river, containing what had previously been the German concession. Belligerent troops were excluded from the area embraced within the defense lines. In this area were some twenty-five Chinese villages which were thus incidentally afforded protection. At the close of hostilities in January, 1925, the Chinese in these villages wished to show their appreciation of this protection by giving the American commanding officer a present. When they found that he was not allowed, on account of his position, to accept presents, they erected in the barracks compound a white marble gateway, known as a "pai fang." On this gateway, they recorded in the marble—in Chinese characters and in English—the tale of the terror and suffering which the war had brought to the Chinese in the unprotected areas and the peace and prosperity which the bravery and kindness of Uncle Sam's troops has brought to their villages. This inscription was signed by the head men of all of the various villages within the lines, and on the top of the gateway they carved in large characters: "In Memory of the Golden Deeds of the Officers and Men of the United States Army Forces in China."

Powerful groups of nationals of some of the Powers, from time to time and with varying degrees of insistence, have advocated joint, forceful intervention. Some have appeared inclined to favor reversion to the theory and practice of spheres of interest. Other groups have advanced the contention that their governments should show favor to a particular group, party, "government" or movement in China.

Generally speaking, those who advocate giving encouragement to one faction or another are at the same time the strongest opponents of any form of intervention. Yet any manner of taking sides, in a material way, must be to some extent interference; and interference smacks of, though it is not identical with, what is technically known as "intervention." If encouragement means giving material aid, if it means supplying money or munitions or officers or leaders, to a faction—it at once suggests a departure from the principle of abstaining from interference in China's domestic affairs. Russia has given an example of that kind of "encouragement."

The "open door" doctrine, in its two phases, equality of opportunity and the integrity of the state in regard to which it is applied, is the corner stone of American foreign policy. In American relations with China, it is fair to say that it rests upon and expresses fixed principles. At the Washington Conference the American Delegation took the lead in effecting the conclusion of treaties and agreements giving these principles definition and precision. A departure from these principles would involve not alone a breaking away from the traditional policy of the United States, not alone a disregard of legal and moral obligations in connection with the Washington agreements, but the setting of an example which might result in a return to methods of an unrestricted competition in relations with China such as were employed in the years between 1894 and 1899 and which had as one of their consequences the Boxer Movement.

It therefore cannot be expected that the American Government will look with favor upon measures which may tend to favor or to facilitate a breaking up of China into several separate political entities, each actually or potentially a "sphere of interest."

The United States is unquestionably committed by tradition, by precedent, and by declaration to certain definite principles of China policy; assurance of equality of opportunity; respect for China's sovereignty and territorial integrity; non-interference in China's domestic affairs. The United States is also committed, partly by tradition and precedent, but more particularly by the provisions and spirit of the Washington agreements, to the principle of co-operative action.

But what about "co-operation?" Co-operative action is one of the most desirable things and one of the most difficult to achieve in the field of human endeavor. It is difficult enough as



between two nations. Where a dozen are involved the difficulty is multiplied manifold.

To make the principle of co-operation effective, there must either be express commitment as to specified courses of action, or provision that the will of the majority shall prevail, or an understanding that in the absence of specifications and of the majority rule each party shall be free to participate in or to abstain from action proposed. The Washington treaties committed the Powers—and in reference to some matters, China—to co-operation in relation to certain *specified* matters; they committed them to the *not-doing* of certain things. Separate treaties between China and various of the Powers individually commit the parties to the doing or not-doing of certain things. But is there anywhere a provision which prescribes a course of action to be taken in case China fails to live up to her treaty pledges? Are the Powers anywhere pledged jointly to employ force? The United States, for one, has never entered into such an agreement.

The theory of the co-operative policy does not require that in *whatever* direction one or more Powers may wish to proceed the others must go; and the express commitments with regard to co-operation are commitments individually and collectively to refrain from aggression, not commitments collectively to proceed in measures of coercion. Any one of the states committed to the co-operative policy may, without violation either of the letter or of the spirit of the co-operative policy, advise against a proposed positive program and decline to participate in its execution. In fact, in case some states proceed with such a program in spite of objection and refusal on the part of the others, is it not those who act, rather than those who decline to act who forsake the co-operative principle?

Referring again to the Washington Treaties, it should be noted that in one of them, the Treaty Relating to Principles and Policies Concerning China, the Powers agreed (in Article I [1]) "To respect the sovereignty, the independence, and the territorial and administrative integrity of China" and (in Article VII) "that, whenever a situation arises which in the opinion of any one of them involves the application of the stipulations of the present Treaty, and renders desirable discussion of such application, there shall be full and frank communication between the Contracting Powers concerned."

The co-operative policy has both advantages and disadvantages. So also has the policy of independent action. In connection with either or both it needs to be kept in mind that when one or more countries assert and exercise the right of independent action, they thereby accord to others the right to act independently.

The theory of the Washington Treaties is co-operation. The American Government co-operated with the others at the Tariff Conference, in the work of the Extraterritoriality Commission, in representations to both of the contending Chinese factions in North China in 1926. American forces have co-operated with others in police measures in China. The American Government co-operated in the presentation of demands—advanced in Identic Notes—to Nationalist authorities in connection with the Nanking Incident, but it *declined* to participate in proposed measures of a coercive character conceived with a view to following up those demands.

The principle of co-operative action applies properly where there has been or can be achieved a unanimity of opinion with regard to a proposed action wherein common rights and interests are involved.

In relation to any particular situation or problem which requires action, there comes a series of questions. What, in the presence of existing conditions and circumstances, would the American Government have a *legal right* to do in China? What is the extent of its lawful obligation to citizens of the United States in regard to (a) protection of life, (b) protection of property, (c) enforcement of rights accorded under treaty provisions in general? How many, and where, are the persons to be protected? How much, where, and of what value is the property which is threatened? Of what sort and of what value are the general treaty rights for which enforcement is sought? What do the people of the United States want the Government to do? What is it possible for it to do? What is it advisable to do? What shall it do?

The Department of State pays much attention to the question of legal rights and lawful obligations. It is not opportunist in its action. In deciding what it may or may not do, the Administration must turn both to national law and to international law. The

United States has commitments—to China and to other Powers. And so has China commitments—to the United States and to the other Powers. In these days, when the importance of law rather than war as a regulator of international relations is being emphasized, it is highly desirable that the American people should remember and grasp the fact that in the constitutional law of the United States, treaty provisions are a part of the law of the land. Also, that ours is a government of laws rather than of men or of opinions.

The Government does not have an altogether free hand in relation to such a question as, for instance, that of affording protection. Treaties provide for rights of persons as well as of states. Is it not, then, a duty, an obligation of the government to protect its citizens in the enjoyment of their lawful rights?

There is not unanimity of opinion—it goes without saying—among Americans, either in the United States, or in China or elsewhere with regard to what the Government *ought* to do. Among Americans resident in China at least three sets of interests, three points of view, and three schools of thought are readily distinguishable. The merchant class is concerned about markets; the missionary class is concerned about propagation of ideas; the official class is concerned about persons and property in relation to laws and principles. But not all of the merchants hold the same views regarding policy; not all of the missionaries have the same outlook, or advocate the same courses, either for the society under which they work or for the Government to which they owe allegiance; and not all of the officials have the same views with regard to what is expedient or what is advisable. The interests, the views and the objectives of the importer and the exporter differ considerably from those of the banker and the railway builder. The perspective and the views of the missionary who sits in a comfortable office in the security of Shanghai, and those of the missionary who resides, by virtue of a special treaty provision and the Grace of Providence, in a remote village in the interior, traveling year in and year out among vocational and avocational bandits, often are quite different. Even among the diplomatic and consular officials there is by no means always identity of view, though within this class there is as a rule less diversity and less particularity of view than within the other classes.

In considering what it may or may not do, what it will or will not do with regard to one country, an Administration must necessarily consider not alone relations with that country but also relations with other countries. The American Government is responsible for considering and safeguarding the interests of all Americans, not only all Americans in China but all Americans everywhere; its concern is for the safety and interests of the *whole* American people.

The Government is well informed with regard to the number and location of American citizens and the value and location of American property in China, and with regard to American investment, trade and other interests involved. Concerning what the people of the United States want, it must form its own conclusions. This it does on the basis of such evidence as it possesses. There pour into it from a thousand quarters, from all over the United States, from all over China, from all over the world, reports, dispatches, petitions, resolutions, letters, telegrams and memoranda expressive of opinions, hopes, desires and demands.

In only one particular, so far as is discernible, has the present Administration deviated from the course prescribed by the traditions, the precedents and the practices to which, in reference to China, it has fallen heir from preceding Administrations. For almost a hundred and fifty years the American people and the American Government have proceeded on the assumption that in China there was a government capable of performing the ordinarily accepted functions of a sovereign authority. Now, and for the time being, the American Government has apparently, of necessity, given up that assumption—as have the other foreign Governments.

This dropping of an assumption can reasonably be condemned or justified only by reference to the facts which are discoverable in the situation in China. There are several contending authorities in China. Whatever some observers may have urged that the American Government should do, the simple fact is that it has maintained and may be expected to maintain an attitude of neutrality as among the contending factions.

In final analysis the Government has to make up its own mind with regard to what is lawful, what is desirable, what is possible, what is advisable—what is to be done. It is not likely that it will depart far from the established lines of American policy. Even



if it should wish to, it would find it difficult to do so. The China policy of the Government always has been responsive to the attitude and wishes of the American people. Public opinion is becoming more and more an active and conclusive influence in the determining of policy and of action. Public opinion does not change rapidly.

The American people are possessed of a peculiarly sympathetic attitude toward the Chinese people, an attitude which is perhaps sometimes sentimental and perhaps somewhat patronizing, but withal genuinely benevolent. Warranted or not, the American people regard the Chinese as a nation of great potentialities, wish them well, and believe that they will be better off and the world better off if they govern themselves. The American people are opposed to any course of action which would constitute in their opinion "aggression" against the Chinese.

On March 30, 1928, the American Minister to China and the Minister for Foreign Affairs of the Nationalist Government at Nanking exchanged three sets of notes embodying terms of settlement of the "Nanking Incident," of March 24, 1927. In the first of these notes the Minister of the Nationalist Government expressed profound regret over the occurrences of March 24, 1927, attributed the blame to Communists, but accepted the responsibility therefor. He stated that his Government had repeatedly issued orders for the protection of the lives and property of Americans in China and undertook that there should be no more violence against them. He undertook to make compensation in full for the personal injuries and material damage done to Americans, and proposed that there be created a joint commission to assess the amounts of compensation due. In reply, the American Minister accepted those terms in settlement of the questions arising out of the Incident and stated that he counted on loyal fulfillment of the said terms. In the second of the notes the Minister for Foreign Affairs of the Nationalist Government referred to the firing by American naval vessels on March 24, 1927, and expressed the hope that the American Government would express regret at the action. In reply the American Minister pointed out that the firing was a protective barrage and stated that the American Government felt that its naval vessels had no alternative to the action taken, yet it deeply deplored that circumstances over which it had no control should have necessitated the adoption of such measures for the protection of the lives of its citizens. In the third of the notes, the Minister for Foreign Affairs of the Nationalist Government expressed the hope that a new epoch would begin in the diplomatic relations between the two countries and suggested that further steps be taken for the revision of the existing treaties and readjustment of outstanding questions on the basis of equality and mutual respect for territorial sovereignty. In reply, the American Minister stated that, although the question of treaty revision could scarcely be considered germane to that of amends to the American Government and its nationals for the Nanking Incident, yet, he would say, referring first to the traditional friendship existing between the United States and China, that, as has been manifest alike from the course of action consistently pursued by the American Government and from the statement of policy made by the Secretary of State on January 27, 1927, the Government and the people of the United States are in full sympathy with the desire of the Chinese people to develop a sound national life of their own and to realize their aspirations for a sovereignty as far as possible unrestricted by obligations of an exceptional character. And, he concluded, "With that in view, the American Government entertains the hope that the remedying of the conditions which necessitated the incorporation of such provisions in the earlier treaties may from time to time afford opportunities for the revision in due form and by mutual consent, of such treaty stipulations as may have become unnecessary or inappropriate.

"To that end, the American Government looks forward to the hope that there may be developed an administration so far representative of the Chinese people, and so far exercising real authority, as to be capable of assuring the actual fulfillment in good faith of any obligations such as China would of necessity have for its part to undertake incidentally to the desired readjustment of treaty relations."

The American Government has declared clearly the principles of its position. It has explained for what purpose it has sent armed forces to China. It has stated what it is prepared to do with regard to treaties. In the presence of an obscure and involved situation in China, where political chaos may continue for a long time, it has envisaged the fundamental facts and taken a "long swing" view,

profiting by the lessons of history. Its acts have been consistent with its statements. Both are based upon principles which have been tried out during a century and a half of American contact with China.

Having explained that the President *cannot* abrogate existing treaties; having declared clearly that the United States is ready to negotiate, either in conjunction with other Powers or "alone," a new treaty on the "entire subject of the tariff and extraterritoriality;" having stated that American naval forces have been sent to China only in view of the "possible necessity" of affording protection to American lives and property; having reaffirmed that the American Government seeks simply that American citizens "be given equal opportunity with the citizens of other powers to reside in China and pursue their legitimate occupations without special privileges, monopolies, or spheres of special interest or influence;" having declared that the American Government is willing to negotiate with regard to Shanghai; and having concluded with the Nanking authorities an agreement in settlement of the Nanking affair—the American Government waits hopefully and with good will for the Chinese to achieve a condition of political cohesion which will enable some voice to speak with authority to and for China.

There is every reason to expect that it will continue to pursue a course directed toward the protection of American lives and the conservation of American interests—a course considerate of Chinese rights and interests and aspirations, co-operative in so far as commitments and common responsibilities are concerned, independent where an issue is peculiar to the United States and China or to another Power and China, independent where some objective is sought by another or other Powers and not by the United States, independent where there arises a question of using force for purposes other than defense, and averse to any activity which smacks of aggression.

## Necessary Information Concerning The Registration of Trademarks

### Application For Re-Registration

Translation by N. F. Allman

**A**PPPLICANTS for re-registration of trademarks which have been registered with the Peking Trademark Bureau prior to May 1, 1927, shall submit five facsimiles and fees as follows:

Re-registration fee	...	...	...	...	\$10.00
Application fee...	...	...	...	...	5.00
Educational fee	...	...	...	...	3.00

together with the original certificate of registration for examination. In case this certificate has been lost then the number and date thereof shall be given.

Applicants for registration of trademarks which have been registered with the Peking Trademark Bureau subsequent to April 30, 1927, shall submit 10 facsimiles, one electro type, and fees as follows:

Registration fee	...	...	...	...	\$40.00
Application fee...	...	...	...	...	5.00
Educational fee	...	...	...	...	12.00

and said applications shall be re-approved and re-published in the "Trademark Gazette" according to law.

Applicants for re-registration of assignments or approval of assignments of trademarks which have been registered prior to May 1, 1927, shall submit five facsimiles and fees as follows:

Re-registration fee	...	...	...	...	\$10.00
Application fee...	...	...	...	...	5.00
Educational fee	...	...	...	...	3.00

and the original certificate of assignment for examination. In case such certificates have been lost, then the numbers and dates thereof shall be given.

Applicants for registration of assignments of trademarks which have not been registered or approved at Peking Trademark Bureau,



or which having been registered subsequent to April 30, 1927, shall submit with each trademark 10 facsimiles and fees as follows:

Re-registration fee	...	...	...	...	\$10.00
Educational fee	...	...	...	...	3.00
Application fee...	...	...	...	...	5.00
Assignment fee...	...	...	...	...	20.00
Educational fee	...	...	...	...	6.00
Application fee...	...	...	...	...	5.00

and on the payment of the total fees the procedure is complete.

There are two prescribed application forms for re-registration, which may be obtained from this Bureau. Separate applications shall be used for each trademark; several trademarks cannot be included in one application, but several applications may be delivered to this Bureau in one envelope.

### New Registrations

Applicants for registration of trademarks shall submit for each trademark 10 facsimiles, one electro type, and the following fees:

Registration fee	...	...	...	...	\$40.00
Educational fee	...	...	...	...	12.00
Application fee...	...	...	...	...	5.00

Electro types shall be forwarded without delay and should accompany the application.

The length and width of facsimiles and electro types shall not exceed four inches of the new measurement (or 12.8). If colored facsimiles are used and are over size they shall be submitted with the application for reference, accompanied by electro types and 10 black and white facsimiles, in order to have same annexed to the Decision of Approval and Certificate of Registration.

Every trademark application or other applications in connection therewith shall be filled in or written with neat and formal writing so as to avoid mistakes.

Foreign or Chinese merchants with residence or place of business in China may apply for registration to this Bureau, and such applicants need not appoint agents, in order to avoid delay and trouble.

The old forms of application for registration may be used pending the issuance of the new printed forms of applications by this Bureau; but separate applications shall be used for each trademark, and several trademarks must not be included in one application. Several applications, however, may be delivered in one envelope.

### Other Miscellaneous Matters

A 10-cent tax-stamp shall be attached to each application. A 50-cent tax-stamp shall be attached to each certificate of registration. Said stamp shall be forwarded with the application, in order to avoid delay.

In case an application for registration of a trademark is disapproved or not granted by this Bureau, the registration fee, educational fee and tax stamp shall be returned to the applicant.

Any other matters arising and that is not covered in this "Necessary Information" shall be governed by the Regulations for Registration, Schedule of fees for registration of trademarks, and the Detailed Regulations of the Trademark Law.

(The foregoing notice appears in "Trademark Gazette," No. 1, p. 53-55, issued by the National Registration Bureau, Nanking.)

# British Trade and Industry

By Gilbert C. Layton, Assistant Editor of "The Economist"

(SPECIAL TO THE "FAR EASTERN REVIEW")

## The Budget Relief to the Heavy Industries

THE British Budget for the current financial year has been described as a "producers' Budget." Certainly the Budget contains far-reaching proposals which intimately concern the country's trade and industry, and especially the heavy industries—the subject-matter of these notes.

For some years past Britain's heavy industries have been passing through a period of marked depression. This depression is due to a number of factors—some international and some domestic. Among the latter iron and steel masters and coal owners have long placed special emphasis upon the heavy burden of local rates. Indeed, so great has this burden become in some cases that manufacturers have had under consideration the removal of their factories to areas where local rates are more favorable. Local rates have to be paid whether a business is profitable or not and moreover, the very depression of the heavy industries aggravates the burden of the rates of the areas in which they operate, since the local authorities are called upon to provide relief for the unemployed.

In a word, Mr. Churchill's Budget proposals aim at substantially reducing the manufacturers' handicap due to local rates. The proposal, briefly, is to remit and to make good out of central funds three-quarters of the rates levied on all productive industry (including railways, harbors, docks and canals, but excluding gas, electrical and other public utility undertakings) and all the rates on agricultural land and buildings.

### The Effect on Prices

The total rates in respect of which relief is to be granted amount to approximately £34 millions a year. The relief to agriculture will cost about £4½ millions and 75 per cent. relief to the remainder about £21 millions, of which at least £4 millions is in respect of relief to the railways. But the latter relief is not to be used to swell railway profits, but is to be passed on under an agreement which has been reached with the railway companies to industries most in need of assistance. One-fifth of the benefit is to go to agriculture through a reduction of freights upon certain agricultural products and the balance is to be used in aid of freight charges on coal, coke

and patent fuels, mining timber, iron ore and manganese ore and limestone for blast furnaces and steel works. In these circumstances, though the general relief is to be spread over the whole of industry in proportion to the fixed plant and premises, this particular £4 millions is to be concentrated mainly upon the heavy industries.

What effect will this relief have upon manufacturers' prices? According to Mr. Churchill, in the case of the steel trade the direct rating relief in the production and accumulation of its raw materials would amount to an average of 3s. a ton, while the freight reductions would represent a further 1s. a ton. This is clearly an appreciable item and it is not to be wondered that industrialists have cordially welcomed the Budget proposals as a bold and far-reaching attempt to aid the country's industry in its effort to regain prosperity.

## The Heavy Industries: An Authoritative Survey

We must now turn to the report of the Balfour Committee—an official committee which is investigating British industry with special reference to its international competitive efficiency—entitled "Survey of the Metal Industries." The report covers a vast field of British industry and runs to some 500 pages. In this paragraph it is only possible to indicate one or two of the leading facts and conclusions regarding the heavy industries. The Committee trace the factors responsible for the present position of the British iron and steel industry, but do not entirely acquit the industry itself of blame. Only a few British works, it says, are modern throughout in equipment and practice and there is not infrequently a lack of balance between the productive capacity at different stages. In the application of methods of fuel economy Great Britain is said to be considerably behind the Continent, and to some extent as regards the efficiency of the coking oven plant and the organization of the coking industry. "In respect of the kind of oven in use Great Britain is broadly where the Continent was before the war. But since then much progress has been made abroad." The committee are clear, however, that while in certain respects British practice may be behind that of particular Continental countries, the British industry leads from the point of view



of the quality of its products. This applies to the whole range of British iron and steel products.

Discussing the relation of the British industry to world production and trade, it is made clear that although output cannot grow indefinitely at the percentage rates of pre-war years, there is no indication that the annual production or annual demand has yet appeared in sight. As for the outlook of the British industry in particular, it will be competing in an expanding international market and its prospects will be largely governed by its capacity to compete on terms of advantage, or at any rate of equality, with the industries of other exporting countries—that is to say, particularly of Continental Europe. Clearly these facts and opinions indicate the need for a comprehensive measure of rationalization—a point which we have repeatedly made in these notes. Such a scheme would, of course, require a considerable sum of money and this the iron and steel manufacturers do not command. It has been rumored, however, that the rationalization of the iron and steel industry will be one of the first tasks of the newly-formed Finance Company of Great Britain and America and undoubtedly there is scope for the undertaking in this direction. The coal mining industry is also discussed, but the survey is largely based upon the report of the recent Royal Commission on the industry, with which we have dealt many times.

### The Iron and Steel Industry

The recent output figures of the British iron and steel industry show a slightly declining tendency. During the past week or two, however, the industry, has been somewhat more active and there is greater hopefulness among manufacturers. It would not be surprising, therefore, if the forthcoming output figures took an upward turn. On the whole, the position of the British industry is better than it has been for some time past. There is no cause for jubilation, but such little improvement as there is or is foreshadowed, following the experience of the recent past, provides legitimate ground for satisfaction. In particular, the export and import figures are better from the point of view of British producers. The total iron and steel exports for the first four months of this year amount to 1,402,846 tons, as compared with 1,158,655 tons for the corresponding period of 1927 and 1,395,730 tons for 1926. Imports, on the other hand, show a welcome decline from the high levels common to the period of the coal stoppage and the months immediately succeeding it.

Developments on the Continent are partly responsible for the more hopeful feeling in the iron and steel industry. In Germany especially there is a tendency for iron and steel prices to rise. Owing to the stability of their currencies, France and Belgium are now competing with Britain on more equal terms than formerly, though these two countries are still considerable factors in world markets. At home the volume of inquiries and buying promises a fair measure of activity in the industry in the coming months. There have lately been rumors of amalgamations and, though these are unconfirmed, it is to be hoped that there is some substance in them.

### The Coal Position

The fact that the Powell Duffryn Steam Coal Company has had to pass the dividend on its ordinary capital for 1927 emphasizes the unhappy position of the British coal industry. The Powell Duffryn Company is one of the largest undertakings in the country, having an issued share and loan capital of approximately £5,000,000. Moreover, it is regarded as one of the most efficient in the industry. Until recent years it has made good returns to its shareholders and paid 2½ per cent. for the year 1926. The passing of this dividend is, therefore, of more than ordinary significance. The available statistics, however, clearly explain the reason for the disappearance of the profit margin. The export trade, for instance, is much below the level recently ruling. The exports for the first four months of this year total 15,745,017 tons, as compared with 17,203,162 tons for the corresponding period of 1927 and 17,481,236 for 1926.

Reviewing the industry as a whole, it is plainly working at a considerable loss. For some time past, it is true, costs have been steadily reduced, but at the same time prices have been falling more rapidly than costs. The result was that for the last quarter of 1927 there was an average loss equal to fully 1s. per ton. More recently the loss has been somewhat less and it is expected that during the first quarter of this year the loss has been in the neighborhood of 9d. per ton. This has been mainly due to the rapidity with which costs have declined. Of course, the loss is still considerable and

should prompt an anxious search for the appropriate remedies. Undoubtedly much assistance could be derived from a vigorous policy of amalgamation and it is unfortunate that there is so much apathy in this connection.

### Aluminium

The production of aluminium has made remarkable progress in recent years. Though a stripling in years, it is in the forefront as one of the most widely used metals. Indeed, the extent to which production has responded to demand is now giving rise to serious concern among producers. There are substantial stocks of the metal on hand, while it is reported that there is a considerable accumulation of scrap. It is considered that some of the large European producers will have difficulty in disposing of their output. Whether the reactions upon the price of the metal will be sufficient to bring output in closer relation with demand or whether artificial measures will have to be resorted to remains to be seen. The countries principally affected include the United States, which is responsible for about one-third of the world's production, Germany, producing about half this total and Canada, third in the list of the world's producers.

There can be no doubt, however, that aluminium has by no means completed its conquests, great as they have been in the past. An ever-widening field for the use of the metal opens up before the industry. In building construction aluminium is pushing its way to the front and an extensive use for the metal has been found in the construction of furniture. Apart from aeronautics, perhaps the most notable direction in which progress has been made in the use of aluminium is for the construction of rolling stock, this practice being particularly prominent in the United States. During recent years the demand for the metal has been greatly stimulated by alloying it, with the result that a light but strong metal has been made available. Doubtless there is still scope for development in this direction.

## China's Foreign Trade

According to investigation made by the Japanese Foreign Office, the amount of trade carried out by various countries with China in 1926 and 1927 was as follows:

	1926	1927
Japan ... ..	31%	33.5%
England ... ..	20%	15%
United States ... ..	16%	19%
Hongkong ... ..	7.6%	11.6%
Germany ... ..	4%	4.2%
Russia ... ..	2.3%	2%
France ... ..	5.5%	4.5%
Italy ... ..	0.8%	1.2%

The notable point in the above is a decline of British trade by 5%, while American trade shows an increase of 3%. The increase of British trade at Hongkong by 4% indicates that the feeling of Chinese at Canton has considerably improved towards Britain.—*Toho*.

## Book Notes

For many years, Wrenches, like other tools, were made of Carbon Steel, the best material then available. But, with the advent of the automobile, came the insistent demand for stronger, tougher materials that led to the development of Alloy Steels of various grades. Their use permits a refinement in design and a decrease in weight of parts, impossible of attainment in the case of Carbon Steel.

The advantage of many years experience gained in making to order special forgings of many kinds of alloy steel has enabled J. H. Williams & Co., Buffalo, N. Y., U.S.A., to develop a line of wrenches or super-service, appropriately called The "Superrench."

Exhaustive tests conclusively prove that Chrome-Molybdenum steel is the strongest, toughest and most desirable material for the purpose ever produced. Wrenches made from it, though of lighter weight, thinner section, greater length and with narrower jaws than carbon steel wrenches of corresponding capacities, are far stronger than the latter. The "Superrench" is said to be absolutely break  
(Continued on page 368).



# The Single-Acting Sulzer Two-Cycle Marine Diesel Engine in Comparison with other Single and Double-Acting Four and Two-Cycle Marine Diesel Engines

**D**URING 1927, thorough trials have been carried out on the testbed at the Sulzer works in Winterthur on a double-acting two-cycle Diesel engine with a single cylinder of 900 mm (35.43-in.) bore and 1,400 mm (55.12-in.) stroke. The engine is designed for a normal load of 2,000 B.H.P. when running at 100 revs. per min. and has been loaded up to 3,000 I.H.P. without supercharging and to 3,500 I.H.P. with supercharging during long continuous tests. This power is the highest which has ever been developed in a Diesel engine cylinder, and the results of the 1927 trials are worthy to rank those obtained by Sulzers in 1912 on a single-acting two-cycle engine with a single cylinder of 1,000 mm (39.37-in.) bore and 1,100 mm (43.31-in.) stroke, developing 2,000 B.H.P. at 150 revs. per min.

The tests with the double-acting engine are directed to the really large Diesel engines of more than 10,000 B.H.P. per unit, and these tests have been carried so far that the firm is now quite prepared to tender for large double-acting two-cycle engines for stationary plants. For marine engines under 10,000 B.H.P., Sulzer Brothers will, for the reasons given below, keep to the single-acting two-cycle engine.

In the technical press it has often been asked why Sulzer Brothers, who have the greatest experience in the construction of marine Diesel engines, have been so reluctant to build double-acting marine engines. Instead of introducing novelties and using the ships of friendly companies as an experimental field for immature designs, the reliability of the ships in service had to be given first consideration. This policy, which the firm has pursued from the very first, has primarily contributed to the ever increasing confidence shown in the large Diesel engine as a reliable machine for the propulsion of ships.

In recent years the good name of the Diesel engine has often been put in jeopardy by the introduction of new designs which had not been sufficiently tried out.

For the fast motor liner, it must be demanded that the vessel can run year after year without interruption at a certain specified speed. In order to ensure the engine-room staff having their necessary shore leave, the whole work required from them when the vessel is in port shall be confined to the work of overhaul demanded as minimum by the Classification Societies. The design of the plant has to be so carefully studied, that all parts subject to overhaul can be dismantled in as short a time as possible. Full attention is to be paid to balancing and to critical speeds, so that the ship may not suffer from any disturbing vibrations, etc.

It can safely be asserted that the single-acting two-cycle Diesel engine is the engine which complies most closely with these requirements. At their official trials, most of the ships equipped with Sulzer Diesel engines have not only attained the expected maximum speed, but have exceeded it. Individual ships have repeatedly arrived too soon at their destinations. The great over-

load capacity of the Sulzer engines also allows a higher speed to be attained at any time; for example, during the recent official trials of the Dutch motor liner *Christiaan Huygens* the ten-cylinder engines, designed for a normal load of 5,800 B.H.P. at 110 revs. per min., were kept running for 26 hours, developing 6,300 B.H.P. at 118 revs. per min.

No annoying vibration has been felt on any of the ships equipped with Sulzer Diesel engines, although the engines run constantly at the stipulated speeds.

When comparison is made with the conditions prevailing on ships equipped with double-acting Diesel engines, the first thing which especially strikes one is that only few of these ships have as yet attained their stipulated speed in service and that many of them suffer badly from vibration, even when the engines are run at reduced speeds.

It can be proved that the 23,000-ton *M. S. Aorangi*, which

is propelled by Fairfield-Sulzer Diesel engines, has always well maintained the stipulated speed of 16½ knots, and in the three years' service already completed it has only missed one voyage to allow of the Periodical Survey being made. The vessel stops five days in Vancouver and five days in Sydney, and in each port one and a half days are required for disinfecting, so that only three and a half days are left for carrying out the normal overhaul, but this short time has up to now proved to be quite sufficient. The actual running time of the ship amounts to 67 per



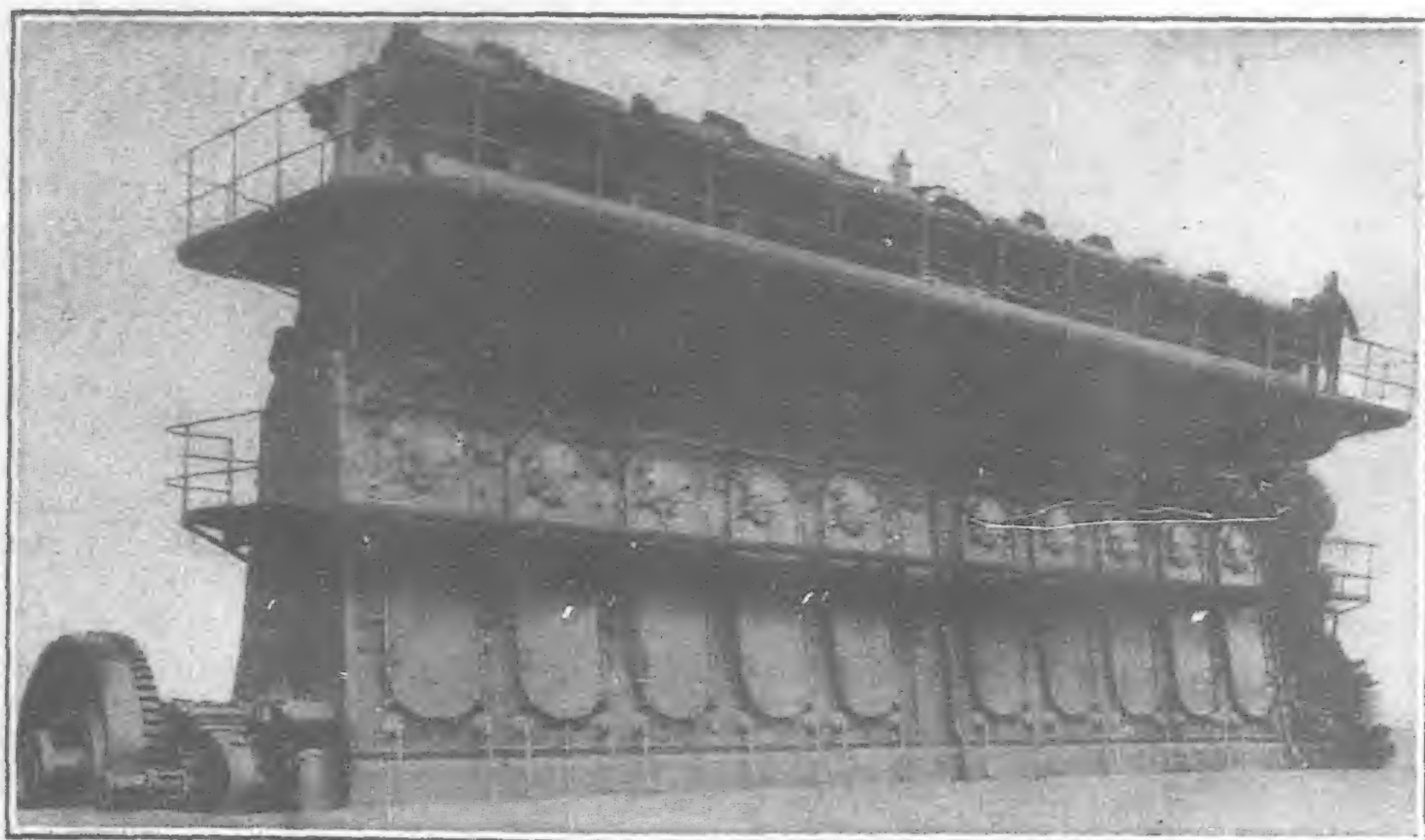
Dutch Passenger Liner *Christiaan Huygens*

cent. of the total service time.

The tanker *Lumen*, equipped with two 1,250-B.H.P. Brown-Sulzer Diesel engines, has surpassed even this figure, having been to sea 311 days per annum, which represents 85 per cent. of the total service time.

The good experience obtained with passenger liners equipped with Sulzer Diesel engines, and careful consideration of the advantages and drawbacks of the different types of engines and various means of transmitting power from engine to propeller, has led Sulzer Brothers to maintain that, with the Diesel engine at its present stage of development, for passenger liners requiring up to 40,000 B.H.P. the single-acting two-cycle engine with direct coupled propeller shaft offers the soundest guarantee for trustworthy and all round satisfactory working, assuming that powers exceeding 20,000 B.H.P. would be transmitted not by two but by four shafts; but this does not mean that Sulzers consider 10,000 B.H.P. as the limit of output for a single-acting two-cycle Diesel engine. Whether single-acting or double-acting two-cycle engines with direct drive, or high-speed engines with reduction gear offer the greatest reliability for higher powers, remains at present a debatable question. It is perhaps unnecessary to mention that the single-acting four-cycle Diesel engine, which has already proved to have passed its limit at outputs of 500 B.H.P. per cylinder, can no longer come into consideration for high powers in open competition.





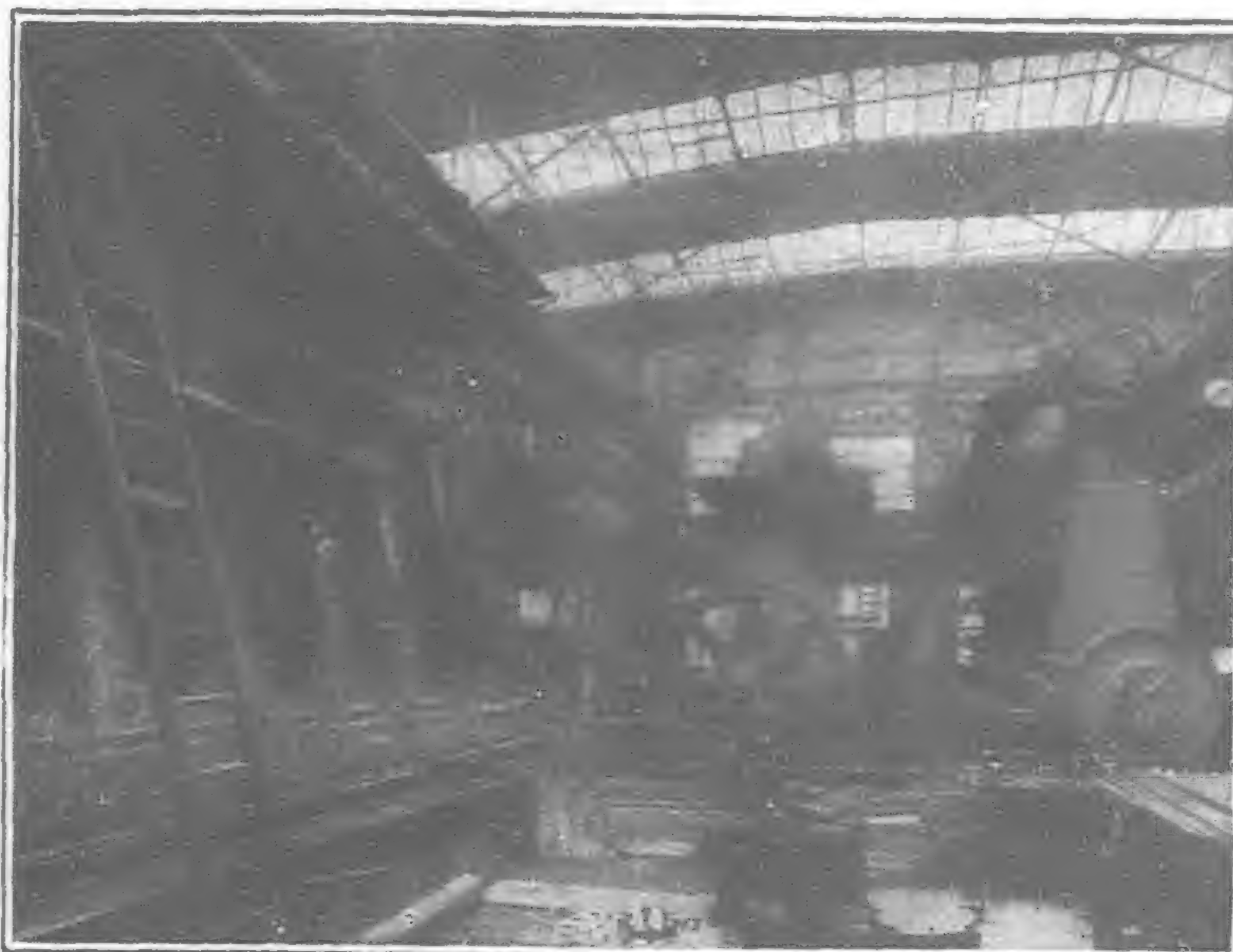
Single-acting 10-cylinder Sulzer Two-cycle Marine Diesel Engine, 680 mm Bore, 1,200 mm Stroke, Developing 7,500 I.H.P. at 115 revs. per min.

In the following pages an endeavor is made to give practical arguments in justification of the preference shown by Sulzer Brothers for the single-acting two-cycle engine for marine service.

For large passenger liners Sulzer Brothers build six, 8 or 10-cylinder engines. These three types are distinguished by regular torque, excellent balancing, and the absence of any perceptible sign of torsional vibration in the shafting or any cross-vibration of the columns. Scavenging-air for the 8 and 10-cylinder engines is generally supplied by independent, electrically driven turboblowers; for 6-cylinder engines scavenging-air pumps, built directly on the engine, may still come into consideration. The injection-air compressors are driven direct from the crankshaft. In order to eliminate free forces of the first order from the compressor, it is, in engines for passenger liners, subdivided into two cylinders, with their cranks set at  $180^\circ$  to each other.

The first point which strikes a person looking at the Sulzer engine, is the robust and yet pleasing design. Bedplate and columns constitute a rigid system, which insures the engine and crankshaft against any distortion, independently of the foundations. It is to a large extent owing to this robust and well thought-out design that no trouble has ever been had on a Sulzer-engined ship with bedplate, columns or crankshaft.

The crankcase is enclosed and oil-tight; the engine room is therefore free from oil vapor, which, when the engines are open, covers everything with a dirty-looking, brown film. Handy inspection-hole covers, fitted in convenient positions and above the shower of oil, allow the working parts to be inspected while the engine is running. When overhauling the engine, the doors on both sides are opened and the accessibility of the driving gear is then the best imaginable; it is better than in the case of engines with single guides which are only accessible from the outboard side of the engine.



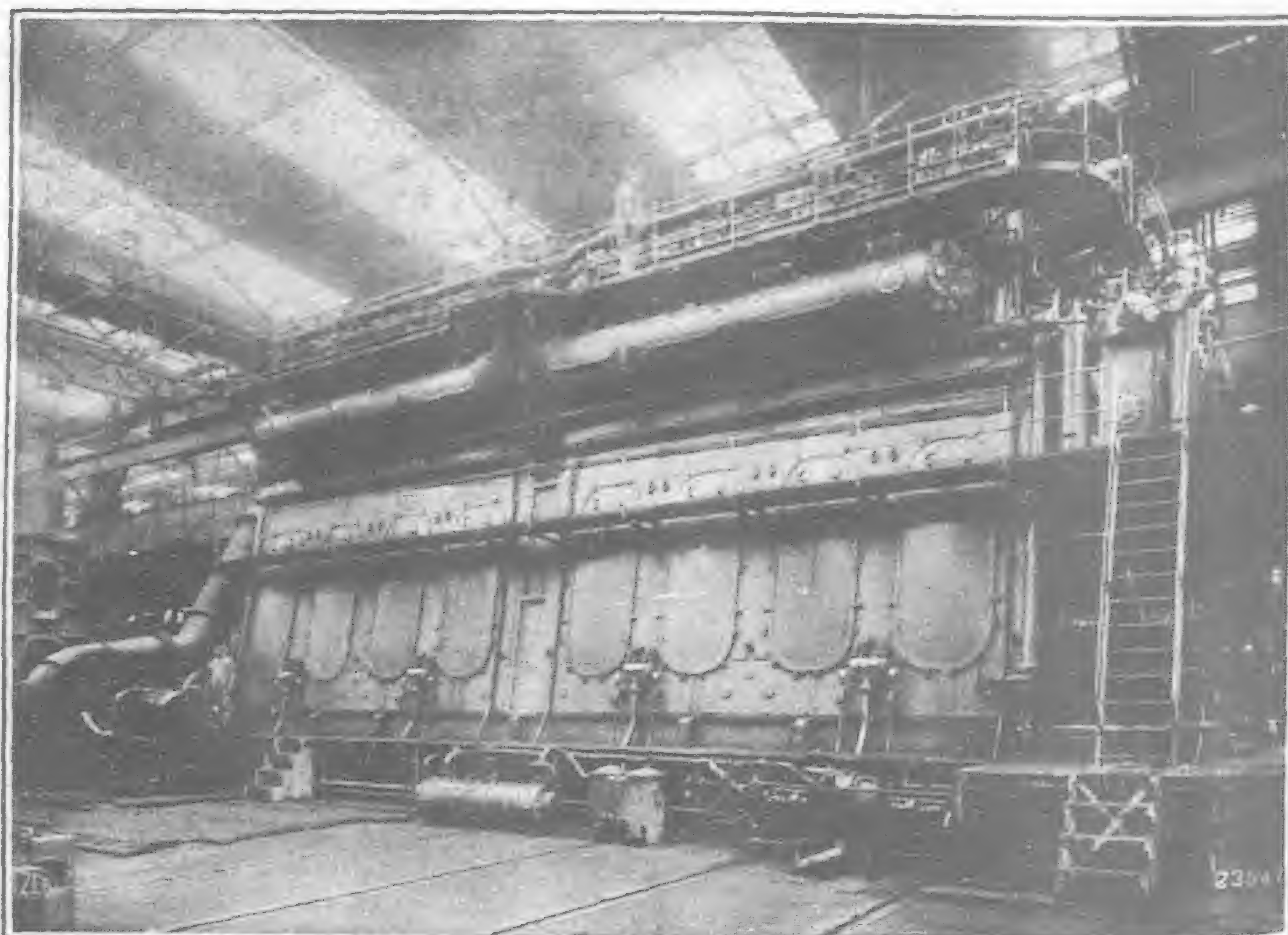
Diesel Engine Erecting Shops in the Sulzer Works, Winterthur. Three Engines Totalling 17,000 B.H.P.

The thrust bearing, a single-collar bearing of Sulzer design, is firmly connected to the bedplate and thus forms a part of the engine. This arrangement insures absolutely accurate alignment with the main bearings and is recognized as excellent by shipbuilders and shipowners. The thrust bearing is connected to the forced lubricating system for the bearings and does not tend to heat or seize even when working under the most severe conditions.

When Sulzer engines are compared with those of other make as regards length, weight and price, it must not be forgotten that the Sulzer engine is ready equipped with a thrust bearing of the best and most up-to-date design, whilst in the case of most other engines a special thrust bearing with special expensive foundations must be provided at a large extra cost. In addition to that, with a separate thrust bearing it is a difficult matter to ensure exact alignment and, if any deformation occurs in the ship's hull, the bearings in the engine itself and of the thrust bearing will be thrown out of alignment, which may result in dangerous heating of the latter and possibly also in fracture of the shaft.

Subdividing the injection-air compressor implies indeed an increase in length, weight and price of the engine, but these drawbacks are more than compensated by the advantages gained of greater reliability of working, a better reserve, and perfect balancing. It may, however, be mentioned that the latest design of thrust bearing with flywheel outside and the latest design of the double compressor for the 8-cylinder engine with cylinders of 680 mm bore, allowed the total length of the engine to be reduced from 18,335 to 17,177 mm, i.e. by about six per cent.

Length and height, or height required for dismantling the



8-cylinder Single-acting Sulzer Two-cycle Diesel Engine, Developing 7,000 B.H.P. at 100 revs. per min.; On the Test-bed at Winterthur.



piston, play quite a different part in a purely passenger liner than in a cargo boat. In the latter, the engine should be as short as possible in order to gain cargo space. Therefore, for twin-screw cargo boats and tankers, four-cylinder engines with turbo blowers have mostly been adopted, and these engines are more advantageous than 6 or 8-cylinder four-cycle engines. In the modern passenger liner, however, an endeavor must be made to keep the engine room as low as possible in order to have more deck space available. The length of the engine is practically of minor consideration; the number of cylinders is with advantage chosen as 8 or 10, in order to keep the cylinder dimensions small and the height correspondingly low.

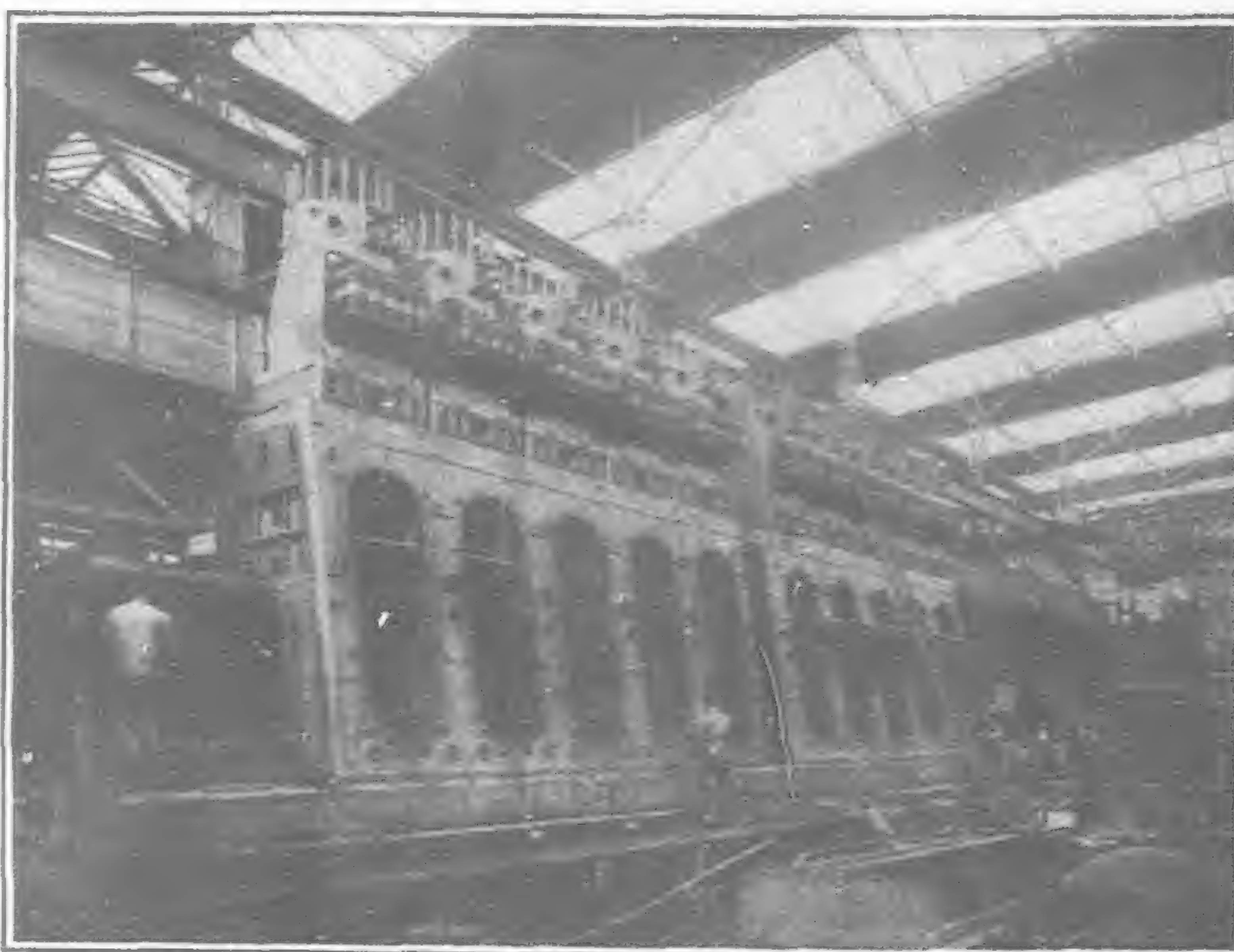
The height required for withdrawing the pistons of a double-acting four-cycle engine is about 50 per cent. more than in the case of a single-acting two-cycle engine with the same number of cylinders and developing the same power; for example, in a 20,000-ton

passenger liner at least one or two valuable decks have to be sacrificed. The double-acting two-cycle engine is also at a disadvantage in this respect compared to the single-acting engine, and the slight reduction in price, from which the purchaser expects to benefit at first, is wiped out by the loss of valuable deck space. This is an additional reason for Sulzer Brothers preferring the single-acting two-cycle engine.

The working cylinders of the latest single-acting Sulzer two-cycle engines are provided with a so-called "lantern." This is a distance-piece located between cylinder and crankcase and fitted with oil-scrapers which prevent the dirty lubricating oil from the cylinders reaching the crankcase, an advantage which fully justifies the somewhat increased height it entails.

The design of the cylinder cover of the Sulzer single-acting two-cycle engine is based on long experience. Formed as a simple solid of revolution with a single, central opening for taking the combined fuel and starting-air valves, it is free from residual casting stresses. Because of the ideal method of cooling and its freedom to expand in any direction, the heat stresses cannot become dangerously high; in consequence of this, the number of cracked cylinder covers has up to the present been less than one per cent. of the number of covers in service.

The fuel valve is the only valve exposed in service to the high combustion pressures and temperatures, and it works continuously for months on end without giving the slightest trouble. The simple plate pulveriser can easily be adjusted to suit fuels of very different properties. When compared with a four-cycle engine or even with a double-acting four-cycle engine of the same



Diesel Engine Erecting Shops in the Sulzer Works, Winterthur. To the Left a 5,800—B.H.P. 10-cylinder Two-cycle Engine under Construction.

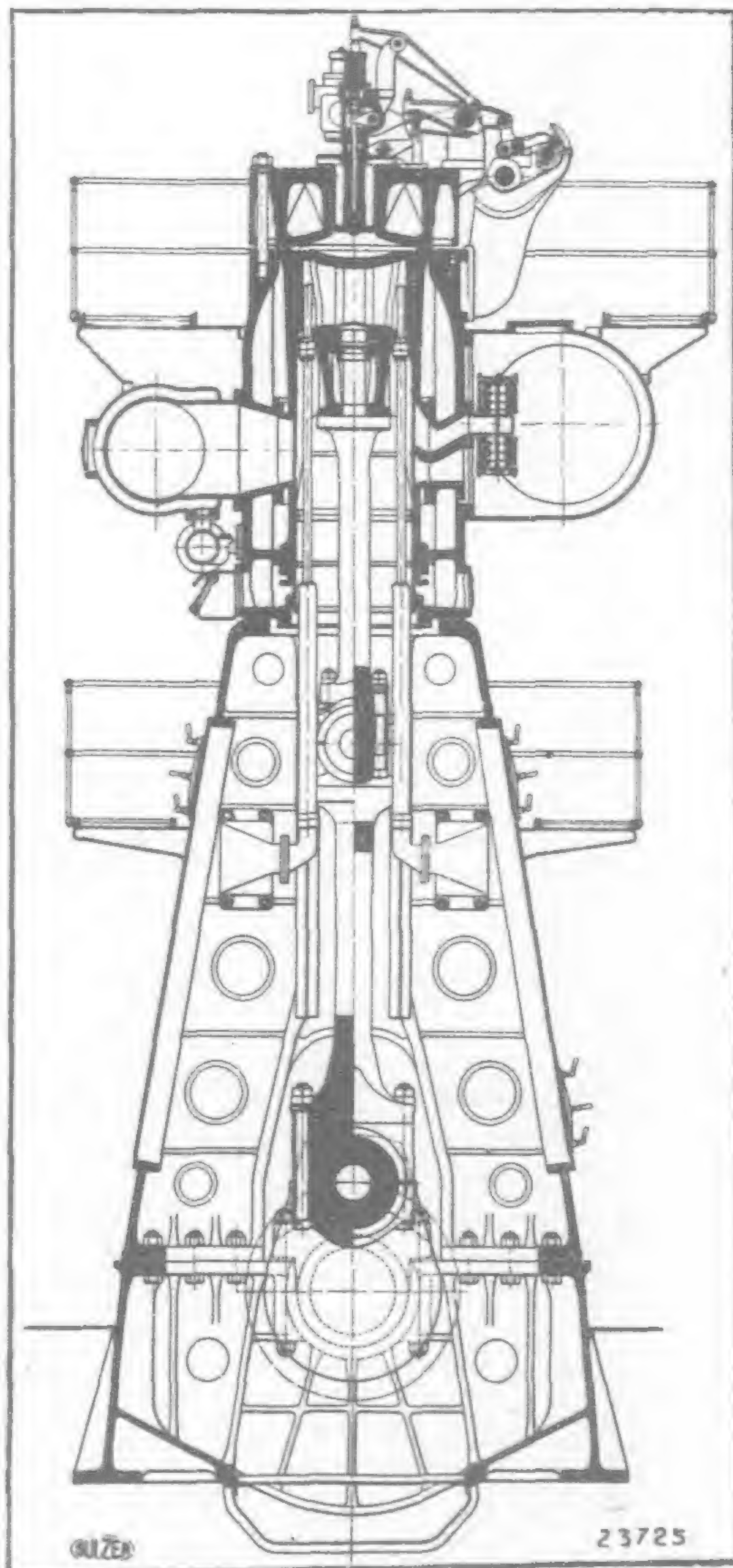
lead to incomplete combustion, and the engine can no longer be put on full load without suffering extensive damage. All these troubles are eliminated in the single-acting Sulzer two-cycle engine.

For decades Sulzer Brothers have taken part in the development of the four-cycle engine. There are thousands of Sulzer four-cycle engines in service in units up to 1,500 I.H.P. Sulzers are consequently well aware of the advantages and disadvantages of the four-cycle type and adopt it mostly for smaller units and chiefly for stationary engines and for locomotives and rail cars.

The original Sulzer system of scavenging with a double row of ports has up to the present not been surpassed by any other system. The scavenging obtained is so perfect that all engines can continuously maintain the relatively high mean indicated pressures and, in addition to that, stand an overload of 20 per cent. with the exhaust still good.

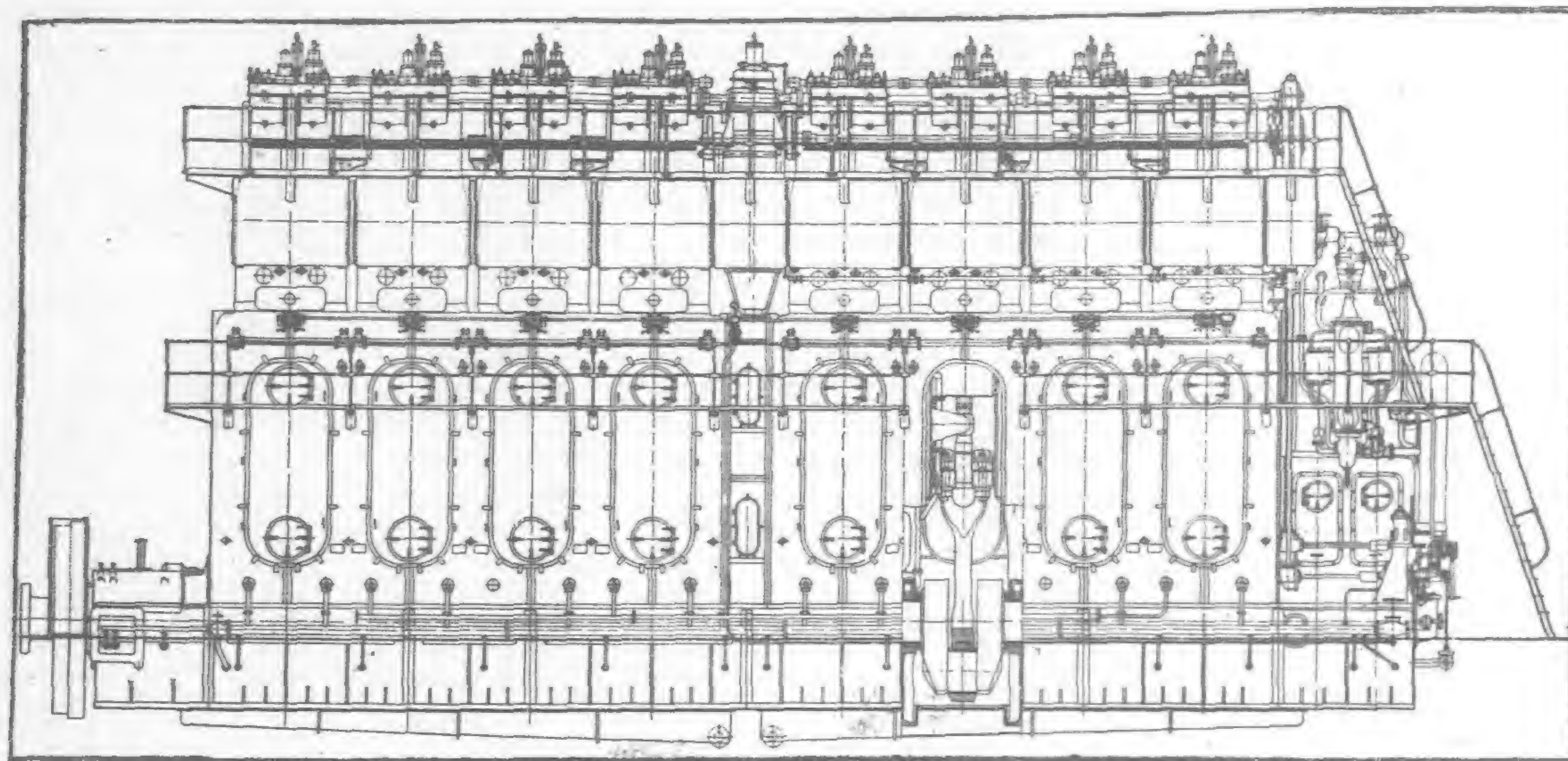
The valve gear is simple and well under view; in service only the fuel needles require to be operated. The gear works almost noiselessly. The reversing of the single-acting two-cycle engine cannot be surpassed for simplicity; even the largest engines can be reversed by hand, without the help of a servo motor. Starting is effected by delivering air and fuel to groups of cylinders in turn. The gear is operated by means of a servo motor, the starting and stopping of the fuel pumps and the opening, closing and emptying of the main starting-air piping to each engine, being effected automatically. Starting and reversing gear are inter-locked, so that it is impossible for any mistake to be made when manoeuvring. The design of the fuel pumps is so perfect that they practically never give rise to any trouble. The plungers are ground into the liners so that no packing is necessary.

An approved type of ball governor, which puts the individual fuel pumps out of action one after the other, prevents the speed of the engine becoming dangerously high in case the propeller leaves the water or is lost entirely. It



Section Through a Sulzer Two-cycle Marine Diesel Engine of Latest Design, 680 mm Bore, 1,200 mm Stroke.





Longitudinal view of a Single-acting 8-cylinder Sulzer Two-cycle Marine Engine, 820 mm Bore, 1,440 mm Stroke, Developing 7,000 B.H.P. at 115 revs. per min.

has been proved in actual service that the engines can work with certainty and without any great fluctuation in speed, even in the heaviest seas, without any adjustment of the hand regulation.

The working pistons have been gradually developed to the design used to-day, without any radical sudden changes having ever been made. Even if the piston cooling should fail, they can work safely for a short time without any risk of cracking. The use of special cast iron for the upper part of the piston and the special method of cooling, depending on the splashing action of the water, enable sea-water to be adopted as the cooling medium, without any troublesome deposits or pitting being caused in the pistons. Sea-water cooling makes it unnecessary to carry a supply of fresh water or cooling-oil, or to have special coolers and circulating pumps. A plentiful supply of the cooling medium is always at hand and at the lowest possible temperature. Since the piston cooling works without internal pressure and the water flows out freely into large funnels, there is no pressure to necessitate the stuffing boxes being kept absolutely watertight. Any water carried over is wiped off

in a water catcher and led back to the funnels outside the engine. The central jet pipe formerly used, which was liable to wear if not perfectly in line, is now replaced by a short fixed jet nozzle and a pressure nozzle in the running pipe, so that the replacing of the jet pipe, and also the delicate work entailed in carefully adjusting it, is eliminated.

When the engine is at work, the working piston can be observed for about three-quarters of its length, whilst in a double-acting engine, this most important of all parts of the engine is entirely enclosed in the cylinder. This is a great drawback, the disadvantages of which cannot be underestimated, as the responsible engineers must always remain absolutely uncertain as to what is happening. Any irregularities, such as smoky and dry pistons, blowing through of the

products of combustion or leakage in the piston cooling, will in general only be noticed when considerable damage has already been done. The pistons of double-acting engines cannot be overhauled frequently because of the long time required to carry out the work, about 48 hours.

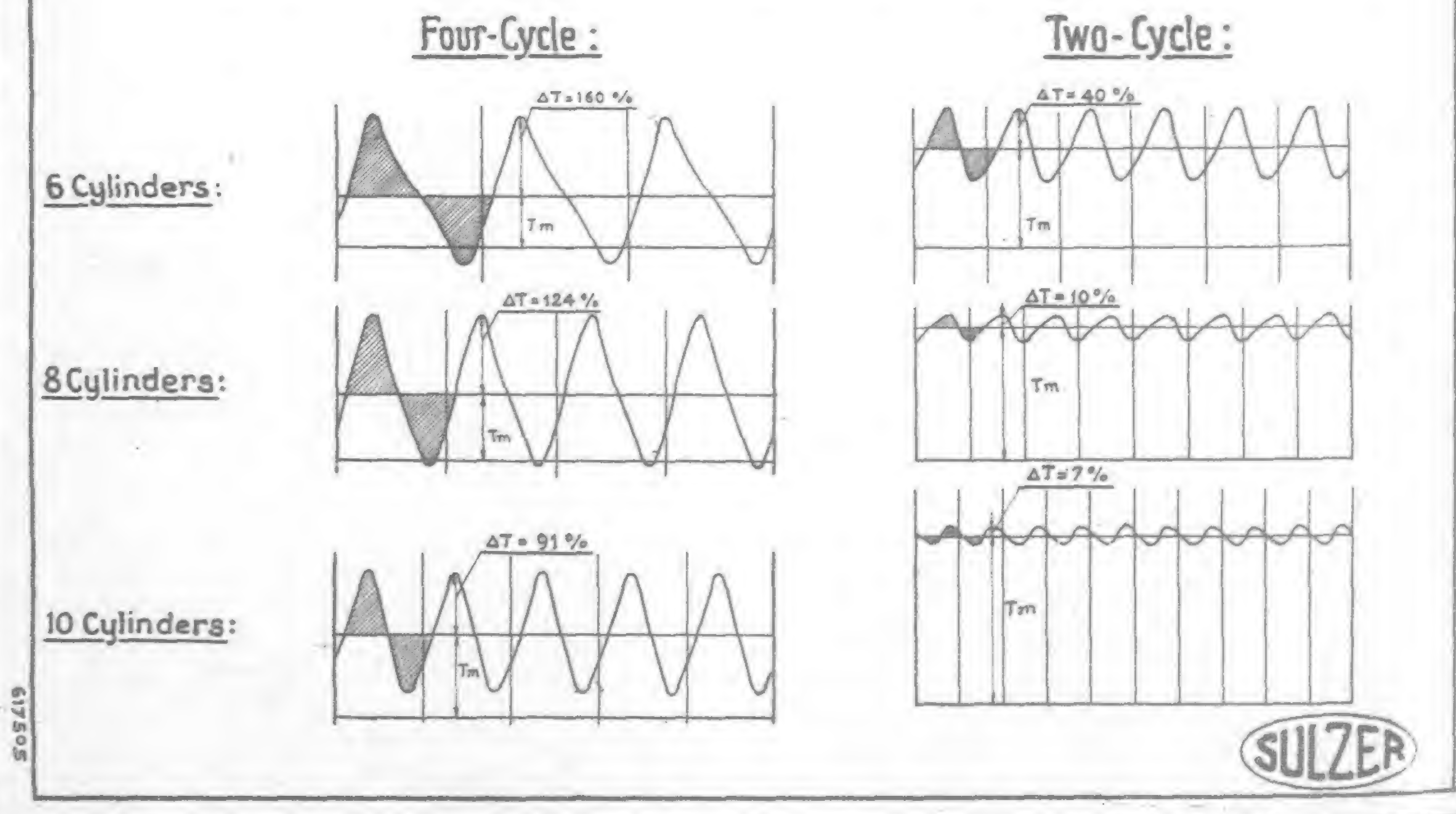
Piston-rods, crossheads and connecting rods in the Sulzer Diesel engines are all of robust construction. The cross-heads are of high-grade crucible steel; the small-end bearings work under high-pressure forced lubrication, and the specific pressures on the bearing surfaces are kept within moderate limits. In the latest designs, the white metal is cast into the small and big-ends of the connecting rod, thus avoiding the use of bearing shells.

The crankshafts of large engines are of the so-called "semi-built" type; crankpin and webs for each cylinder are forged from a single piece of steel and shrunk onto the journals. The dimensions of the crankshaft throughout are somewhat greater than demanded by the Classification Societies. Main and crank bearings work with normal forced lubrication.

In general, it results that the working parts of the present Sulzer two-cycle engine do not give rise to any trouble, as the wear to which they are subject is practically very slight.

In this connection it can be emphasized that no annoying vibrations have ever been noted on any passenger liner equipped with Sulzer Diesel engines. This can to a large extent be attributed to the particular attention paid by Sulzer Brothers from the very beginning to the question of balancing and critical speed. In eight and 10-cylinder engines the tangential force diagram shows almost no fluctuation. This and the above-mentioned robust construction of the columns contribute also to the smooth running of the Sulzer engines.

### Tangential Force Diagrams of single-acting Diesel Marine Engines.





If the tangential force diagram of the single-acting Sulzer two-cycle engine is compared with that of a single-acting four-cycle engine, and when it is considered that the reaction to this torque is transmitted over the crosshead guides to the columns and over the bedplate connections to the hull of the ship, it is easy to see why the single-acting two-cycle engine must run much more smoothly than a four-cycle engine with the same number of cylinders and developing the same power. The variations in the tangential force diagram of the Sulzer two-cycle engine are, for a 6-cylinder engine, about equal to those of a triple or quadruple-expansion steam engine; the diagrams for 8 and 10-cylinder engines approach that of the steam turbine. The variation of  $\pm \Delta T$  of 6, 8 and 10-cylinder four-cycle engines amounts to 160, 124 and 91 per cent. of the mean tangential force  $T_m$ . The corresponding values for two-cycle engines are 40, 10 and 7 per cent. and are therefore, for 8 and 10-cylinder engines, more than 12 times smaller than in the case of four-cycle engines.

The balancing of the 6, 8 and 10-cylinder two-cycle engines is practically perfect. The group of working cylinders alone, without the scavenging air pumps and air compressors, has no free forces of the first order and no free forces of the second order. If a single-cylinder compressor is fitted, this gives rise, in a four-cycle as well as in a two-cycle engine, to free forces of the first and also of the second order. In order to eliminate the free forces of the first order, the compressor of 6, 8 and 10-cylinder Sulzer two-cycle marine engines is subdivided into two cylinders with the cranks set at  $180^\circ$  to each other. The unbalanced moments are also very slight. The double compressor is set so that its free moment partly compensates that of the working cylinders. In addition, it is known that in general no vibration is caused in the engine or in the ship from moderate, free moments in the vertical plane and axially. The theory of these free moments holds, however, only for a sufficiently rigid construction, such as is adopted in the Sulzer engines. In the flexible construction adopted by some firms, the free moments of the two halves of the engine, acting opposite to each other, may cause dangerous distortion in the engine itself, and this is transmitted to the bedplate and the hull of the ship.

The critical speed conditions for crankshafts and intermediate shafting in 6, 8 and 10-cylinder single-acting Sulzer two-cycle engines are very favorable.

Below is given a summary of the critical speeds of the first degree (vibration with one node) in the Sulzer engine. These are dangerous particularly for the shafting between flywheel and propeller. The critical speeds of the 2nd degree (vibration with two nodes), which affect the crankshaft, are also given.

The figures hold for engines with cylinders of 680 mm bore and 12 mm stroke, developing 500 B.H.P. per cylinder at 100 revs. per min.

6 cylinders ncrit	1st degree	6th order = 32 r.p.m.
	2nd "	9th " = 114 r.p.m.
	2nd "	12th " = 85 r.p.m.
8 cylinders ncrit	1st degree	8th order = 27 r.p.m.
	2nd "	8th " = 125 r.p.m.
	2nd "	12th " = 84 r.p.m.
10 cylinders ncrit	1st degree	10th order = 22 r.p.m.
	2nd "	5th " = 160 r.p.m.
	2nd "	10th " = 80 r.p.m.

From the above it can be seen that for 6, 8 and 10-cylinder engines the dangerous critical speeds of the first degree lie below the minimum speed of the engine, whilst on the other hand the dangerous critical speeds of the second degree lie safely above the normal speed. The critical speed of the second degree 12th order, for the 6 and 8-cylinder engines is not dangerous. In the 10-cylinder engines the node of the second degree is near the middle of the engine, so that the resultant 10th order is very small and the additional stresses are also very slight.

Apart from the critical speed caused by the irregularity of the propeller resistance, the order of which is determined by the number of blades, the three single-acting Sulzer two-cycle engines mentioned above, designed for passenger liners, are practically free from vibration over the whole range of manoeuvring and service speeds.

In single and double-acting four-cycle engines, in consequence of the comparatively weaker shafts, heavier flywheel and heavier running gear, the natural frequency of the second degree lies considerably lower, so that in 6-cylinder engines the very dangerous sixth order, and in 8-cylinder engines the still more dangerous

fourth order moves into the neighborhood of the comparatively high normal speed of the engine.

For many years Sulzer Brothers have investigated the critical speed of every plant, even of the smallest, and also of all auxiliary engines together with their electric generators, and in every case the shaft-diameter and the moving masses have been arranged so as to obtain the best possible conditions for the required normal speed.

Quite, or partly independent of possible torsional vibrations of the shafting, there is in double-acting engines as hitherto constructed, a dangerous cross-vibration of the engine in the plane at right angles to the shaft. This vibration arises when the reversal in pressure on the crosshead guides synchronises with the natural period of vibration of the system. In the single-acting Sulzer two-cycle engine, the frame is rigid enough and the center of gravity is low enough to keep the natural period of vibration of the system well above the impulse figure, so that this vibration has never yet occurred on any Sulzer-engined ship. In single-acting Sulzer two-cycle marine engines the zone of critical vibration lies safely above the maximum working speed; the engine, whether it has 4, 6, 8 or 10 cylinders, stands absolutely steady and no loosening of the foundations has ever occurred.

The single-acting two-cycle engine is the only engine which does not have any reversal of pressure in the bearings, and this is one of the main reasons why the Sulzer engines work so smoothly.

In single-acting four-cycle engines the pressure in the crosshead and crankpin bearings is reversed at the end of each suction and exhaust stroke; this reversal of pressure is accompanied by a knocking of the crosshead pins and crankpins on the bearing shells. In double-acting engines the reversal of pressure at each stroke causes also a hammering of the crankshaft on the main bearings. The knocking of the many heavy masses, which are to a certain extent tossed up and down in the many bearings, combines into a noise, which is readily transmitted through the steel structure of the ship and can be heard in the farthest cabin. The play in the bearings cannot be reduced so far as to make knocking an impossibility, as that would endanger the reliability of working; this is one of the main reasons why Sulzer Brothers would only reluctantly assent to the double-acting two-cycle engine being adopted as the propelling medium for passenger liners. With the single-acting two-cycle engine all these troubles are eliminated; the running gear works absolutely quietly and without any knocking, as there can never be any reversal of pressure except during the short starting period. This is an advantage of the greatest importance, particularly in luxuriously fitted passenger liners.

Breakage of connecting-rod bolts, a trouble which may cause severe damage, will happen only in engines with reversal of pressure and not in single-acting two-cycle engines.

An important point with regard to the health of the engine-room staff, is that no noxious gases can find their way into the engine-room from the single-acting Sulzer two-cycle engine. Below the ports, the piston is rendered gas tight by rings springing inwards, so that any gas which may have managed to pass the upper piston rings must leave through the exhaust ports. In addition to that, fresh air is continuously passing through the clearance space between piston and cylinder. In four-cycle engines the exhaust gases can escape into the engine room through the working pistons and through the guide-pieces of the exhaust valves; on some ships this gas has already been proved to have a bad effect on the health of the engine-room staff.

Any overhaul can be carried out on a single-acting Sulzer two-cycle engine in the shortest time imaginable. The number of parts requiring overhaul is very small. A fuel needle with pulveriser can easily be dismantled and replaced within 15 minutes. On the M. S. Aorangi a damaged piston was replaced at sea by a new one in five hours, whilst the other three engines continued to work at full load; i.e. five hours after being stopped the fourth engine was again on full load. In four-cycle engines the number of parts needing overhaul is considerably greater than in a two-cycle engine; the exhaust valves must frequently be renewed. In the double-acting four-cycle engine the number is still greater, and it takes 48 hours or more to replace a piston or one of the bottom cylinder covers. All parts are also much heavier and more difficult to handle than in single-acting two-cycle engines, so that there can never be any question of carrying out repairs at sea on a double-acting four-cycle engine, when a bottom cylinder cover, a piston or a piston rod becomes damaged.



There is, of course, a greater risk of breakdown in a double-acting engine, with its many hidden and complicated parts, than in a single-acting engine. On ships equipped with Sulzer engines all the work of overhauling can be done by the engine-room staff alone. On the other hand, in ships with double-acting four-cycle engines it has been observed that such work must be carried out by men specially brought on board for the purpose. The danger of this method and the time taken for the work has repeatedly been referred to, as men from shore are not so keenly interested in reliability in service as the engine-room staff is. In order not to give an undue amount of work to the engine-room staff, but to allow them the necessary amount of leave, it is therefore of very great importance that the reliability of working should be as perfect as possible, the number of parts to be overhauled as few as possible and the time required for dismantling and replacing as short as possible. All these requirements are fulfilled by the single-acting two-cycle engine.

With regard to material and workmanship, Sulzers have always held that only the very best is good enough for marine engines. It would certainly be possible to cut down costs here and there, but the firm is persuaded that a reduction in price could never balance any sacrifice in quality or in reliability of service. Even slight troubles which would cause the ship to lie up for only a few days, could wipe out any gain obtained from the so-called cheaper engine. For large passenger liners, where the daily expenses amount to huge sums, the cost of the plant is of much less importance than its absolute reliability in service.

Of late years various schemes have been proposed for transmitting high, and very high powers to two and four propeller shafts. Sulzer Brothers are however at present of the opinion that for powers up to 10,000 B.H.P. per shaft, direct drive by means of reversible single-acting two-cycle engines still continues to offer the highest degree of reliability in service, provided no special requirements have to be complied with. The speeds of standard Sulzer engines with the most favorable stroke-bore ratio of 1.75:1, are well suited to the normal propeller diameter and propeller efficiency.

In quadruple-screw ships, where a smaller propeller diameter is necessary, an engine with a somewhat shorter stroke and correspondingly higher speed will be preferred. For high powers the subdivision into four units is undoubtedly an advantage; the reliability in service is increased, and the speed and manoeuvring capacity of the ship will be reduced only slightly if one of the engines is out of service; the head room required will be less than in a twin-screw ship and a larger amount of valuable deck space will consequently be available.

In high-speed engines with reduction gear the reliability of the engine in service will not be increased, and in addition there is further mechanism which is also subject to wear and tear and to possible breakdown,—the heavy reduction gear in conjunction with friction or hydraulic couplings. This method of drive has certainly the advantage of allowing two to four engines to be coupled to the same shaft; a damaged engine can then be shut down and overhauled whilst the shaft is still kept running by the others.

It was necessary for the advocates of the four-cycle engines to change over sooner to the double-acting principle, as outputs of over 500 B.H.P. per cylinder are difficult to manage. Without making any proper allowance for the inevitable complications in a double-acting four-cycle engine, they hoped to be able to produce something as good as the single-acting two-cycle engine. This attempt was naturally bound to fail, as the advantage aimed at, *i.e.* doubling the cylinder output, could only be purchased at the expense of the drawbacks already recorded.

## Book Notes

(Continued from page 362).

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# Manufacturing Industries in North Manchuria\*

PRIOR to the construction of the Chinese Eastern Railway manufacturing industries in North Manchuria were in a very primitive state. Various cereal foodstuffs were produced by the manufacturing plants, which included old-fashioned oil and flour mills, breweries and distilleries, and vermicelli and soy factories. In addition to these were the products of cottage industries, such as coarse cotton cloth and daily necessities, all turned out by hand and for local consumption only. After the construction of the railway. Russian capitalists installed modern roller mills, distilleries, and other manufacturing plants with a view to converting local raw materials into finished goods for local consumption. This marked the beginning of industrial development in North Manchuria along modern lines.

Harbin, situated on the Sungari River, being a railway junction, and enjoying exceptional facilities, both by land and water, soon became a prosperous center of commerce. As early as 1903 modern style flour mills had already been operating in the city, making flour not only for the local market but for export to Dairen and other points in the south. Modern breweries were also founded at about the same time. The Russo-Japanese war created an almost inexhaustible demand for army supplies, and led to a large inflow of money into the city. To both Russian and Chinese adventurers Harbin was an Eldorado, to which war and famine refugees from Shantung and Russian immigrants flocked. Harbin being the base of the Russian army, the bulk of the army supplies was obtained on the local market with the result that prices went up abnormally and the manufacturers were kept working day and night to meet the demand. In a brief period of seven years ending 1905 the population of the city and suburbs increased to 100,000, and a few years later, to 150,000. But after the evacuation of the army, a slump set in, with the result that all the factories were compelled to cut down their output by 50 per cent. Some of the industrial works, such as glass, and soap factories, roller mills and vermicelli plants were compelled to close down.

After a period of depression, during which Manchurian raw materials began to find their way to the world markets, conditions gradually returned to normal. A boom was then created by the World War, and manufacturers in North Manchuria, believing that an immense market was opened to them, increased their output to meet the demands of the belligerent countries. But the boom proved short-lived. When fighting was hottest in Europe, revolution broke out in Russia, and the subsequent blockading of Russian ports by the allied countries brought disaster to Manchurian manufacturers on a scale similar to that caused by the slump following the close of the Russo-Japanese war. When normal conditions once more prevailed manufacturers in Russia and other countries dumped a portion of their surplus products on the Manchurian market with the result that the local manufacturers found it difficult to dispose of their output.

Russian manufacturers in North Manchuria are the greatest sufferers from the World War and its aftermath, all of them having been ruined by the depreciation of the rouble, which, however, also inflicted

serious losses on Chinese manufacturers. The depreciation of the rouble and the political changes in Russia caused many Russian factories in Manchuria to change hands or suspend operations. At present most of the modern industrial works are financed by Chinese or Japanese capitalists, who find that though conditions are improving, the local market is not big enough to absorb their products.

## General Conditions

With a vast hinterland still awaiting the arrival of immigrants, industry in North Manchuria is far from fully developed. The most important industrial center is Harbin and its suburb, Fuchiati. In the latter about 75 per cents. of the factories, oil and roller mills, breweries, etc., are modern style, but, compared with Harbin, its activities are only secondary. With the exception of wool-washing establishments, Harbin has all other kinds of industrial works. In the western section of the Chinese Eastern Railway zone, Hailar is the most important industrial center. Numerous manufacturers of animal products operate in the city, which, being the wool and skin exporting center from Mongolia, boasts six wool-washing plants of which five are owned by private capitalists and one by the C.E.R. Other works include a roller mill, two tanneries, an oil mill, a distillery, three soap factories and three felt factories.

Next in importance in this section is Manchouli, where two soap factories and one tannery are operating.

Between Hailar and Fularki, modern industry is still in its infancy. At Poktu, for instance, a roller mill is being constructed, while a match stick factory is being planned. At Yakshih, there is one oil mill, and at Fularki, an oil mill and a flour mill.

In Tsitsihar district industry is better developed. There are three oil mills, three flour mills, a match factory, a cigarette factory, and a vermicelli plant, all of modern style, besides numerous old-fashioned oil and flour mills and brick and pottery factories.

At Anta there are six oil mills, and two flour mills, and a Mankou one oil mill.

In the southern section of the line Shwangchengpao and Kwanghengtze are comparatively noted industrial centers, each boasting a few modern industrial works.

In the eastern section Ashiho has the largest sugar factory in North Manchuria, in addition to a modern oil mill.

At Imienpo there are a beer factory, a glass factory, a flour mill, an oil mill and several distilleries. A newly organized oil mill known as the Moscow Co. will start operations shortly.

At Hailin, east of Imienpok there are several oil mills and rice polishing mills.

Though Suifengho is an important station on the C. E. R., manufacturing industry is rather backward. As the railway taps a rich timber producing hinterland, lumbering companies and saw-mills



Kirin Electric Light Plant

\*Translated from the Chinese edition of "North Manchuria and the Chinese Eastern Railway," issued by the Economic Bureau of the C.E.R.





North Manchuria Electricity Co., Harbin

at the different stations are an important feature of industry.

North Manchuria manufacturers face two serious problems, shortage of labor and fuel. In spite of the immense forests and many coal mines, factories work largely not on local products but on fuel imported from South Manchuria, namely Fushun coal. The enterprises operating along the railway are in a worse position than those at Harbin as regards the labor question. The factories at Anta, for instance, are at times obliged to contract labor in the south of Manchuria and to assume the cost of transporting such laborers from Newchwang or Dairen and back, which is very burdensome in view of the non-permanent character of the work. Harbin, on the contrary, has an abundant supply of local labor, but as the majority of the laborers are immigrants from Shantung province they naturally ask for higher wages than those recruited in South Manchurian ports. Labor is mostly Chinese, and it is only when a new enterprise is organized under the management of the railway or under European supervision that Russians are engaged. In enterprises of mixed ownership, or those of purely Russian ownership, the majority of the employees holding responsible positions are Russians.

At the beginning of the manufacturing era in Harbin the question of skilled labor was acute. Such workmen demanded high wages and were rare. Now, because of the adaptability of the Chinese to new forms of labor, and, partly because of the presence of a large number of both Russian and Chinese immigrants, the situation has changed, and there is now a plentiful supply of skilled labor of all kinds.

Different classes of workmen earn different wages. Common labor is paid \$8 to \$16 a month, with board, lodging, and baths. Without board and lodging, the rate is \$20 to \$30 a month. The relations between workmen and employers may be characterized as one of absolute non-interference. With the exception of measures taken by the City Council relative to sanitation, the situation of the workmen is regulated by no rules or standards. Business and industrial organizations in China allow their employees to share in the profits, and those at Harbin do the same. Generally, an employee, after three years' service, is allowed to share in the profits. This compensates for the low wages and makes the interest of employer and worker identical. As a rule Chinese manufacturing enterprises are operated continuously, according to the Chinese calendar cycle, without closing down even for Sundays. If stoppages for repairs, cleaning of boilers and holidays are deducted the working year contains approximately 300 working days or sometimes a little more. The work is performed by two shifts of laborers, each relieved after eight hours. The working day of every individual laborer thus includes eight hours one day and 16 hours the next, or an average of 12 full working hours. Actually, however, factories have within recent times suffered frequent interruptions and often closed down entirely due to the unsatisfactory conditions. The manufacturer, however, is subject to overhead charges even when his plant is idle, as he must keep some of the staff on the payroll while the workman on the other hand, is never sure of permanent employment. In the past the majority of the immigrants from

Shantung used to go to Manchuria without their families, and as soon as they had saved some money, they went back to their homes.\*

Manufactures produced in the Railway Zone, except what is consumed locally, find their way to outside markets by railway, cart or waterway. As the bulk of the manufactures for export is loaded at private sidings, the railway authorities are not always furnished with proper descriptions of goods. But it is safe to say that what is imported by factories is, cereals, coal, firewood and gunny bags, and exported, flour, bran, beancake, bean oil, alcohol, alcoholic drinks, sugar and canned goods. At Harbin and its suburb, Fuchiatien, the most important industrial works are oil mills, flour mills, electric light plants and some British exporting companies. The yearly quantity of goods carried by the railway for the establishments in Harbin district averages in total 570,000 tons, of which about 31 per cent. are imports and 69 per cent. exports. This figure represents nearly 20 per cent. of the total goods traffic of the railway for the year.

The industrial quarter of Harbin may be divided into four sections:

(1) Patsai, which enjoys special transportation facilities because of its close proximity to both river and railway. In this section there are 26 oil mills, six flour mills, one beer factory, and several other small industrial works.

(2) Fuchiatien, where there are 13 oil mills, seven flour mills, two distilleries, one tannery and one cotton cloth mill, in addition to numerous small establishments, including cloth weaving mills, hosiery knitting plants, soy factories, iron works, etc.

(3) Shangfang, where there are 13 oil mills, three flour mills, and several others including one distillery, one saw mill, one glass factory and one yeast manufacturing plant.

(4) Liangtaihsiaotsai where there are six oil mills, one flour mill and one distillery. To provide transportation the railway has built sidings from the Harbin station to each of these industrial sections, Fuchiatien excepted. The sidings are subject to extension to wherever a new factory is opened.

Taoli, in Harbin, is a business rather than industrial quarter. In this section there are only one oil mill and four flour mills.

The bulk of the imports and exports for the factories at Patsai and Fuchiatien are railed or discharged at Tipatuan, where about 45 per cent. of the goods traffic consists of manufactures coming from, or raw materials going to, the factories. Of the goods hauled for the oil and flour mills, about 85 per cent. is export and 15 per cent. import. This unbalanced proportion is due to the fact that the bulk of the imports, consisting of raw materials like bean or wheat, comes by water, while the exports, consisting of flour, beancakes and bean oil go by rail. The goods hauled for the industrial works at Shangfang are 40 per cent. imports and 60 per cent. exports, while for the establishments at Taoli imports exceed exports by about 4 per cent., because Taoli is a commercial rather than an industrial section. If one estimates the total imports and exports hauled by the railway for the different sections of the town on a

\*This may now be changed owing to conditions in Shantung compelling hundreds of thousands to abandon their homes to settle in Manchuria.—ED.



Tien Hsing Foh Flour Mill—Mill No. 1, Changchun, Kirin.  
Capacity, 3,000 50-lb. bags per day



percentage basis, Patsai and Fuchiatien would claim 45 per cent., Shangfang, 31 per cent., Taoli, 16 per cent., and Liangtaihsiaotsai, 8 per cent. Classified by nationality about 74 per cent. of the factories in Harbin are Chinese owned, 21 per cent. of European ownership, mostly Russian, and 5 per cent. Japanese owned.

Among the Chinese factories, oil mills predominate, while most of the Russian works are flour mills and distilleries. Nearly all the factories at Fuchiatien are Chinese-owned. The oil mills are the greatest patrons of the railway and the flour mills rank second.

### The Bean Oil Industry

In the manufacturing industries of the C. E. R. Zone, bean oil mills occupy the first place. A few years ago, this industry still remained behind flour milling, and it is only since 1923, when a large number of flour mills suspended work, that the bean-oil industry forged ahead. So far as capitalization is concerned, the oil factories still occupy the second place. Most of the oil mills are at Harbin and Fuchiatien, where they total 53 against the 23 flour mills in the same places, and consume every year 490,000 tons of beans, valued at \$35,000,000, against 160,000 tons of wheat, valued at \$20,000,000, consumed by the flour mills. In addition to these modern style plants there are over a thousand of the small, old-fashioned, oil mills, which consume every year 325,000 tons of beans. This shows the importance of the rôle played by the bean oil industry in the economic life of North Manchuria. The development of the bean oil industry has given impetus to the cultivation of bean crops in North Manchuria, where the total yearly output, after meeting the demand of the local mills, leaves a surplus of over 2,000,000 tons for export, which shows that there is colossal scope for the development of the bean oil industry in this region.

The difference between steam mills and old-fashioned mills lies first in mechanical equipment. The number of presses in the old-fashioned mills is never more than two or three, while even the smallest steam mill has no less than twenty, and the large mills count up to one hundred and more. Secondly, the presses themselves are of larger dimensions in the steam mills, and produce beancakes of great diameter and thickness. According to construction and method of operation presses are of either screw or hydraulic type. In the former, the primitive wedge of the old-fashioned mill has been replaced by a metal screw which is turned by hand by the laborer in charge of the press. The hydraulic press is put into motion by a steam pump which in a short period of time exerts high pressure, and is from three to three and one half times more efficient than the screw press. In steam mills more attention is given to the preparation of the beans for the press. Before the beans are pressed, they are cleaned of dust and foreign substances; the crushing is done by roller mills. This is the general method of treatment in vogue in steam bean oil mills in both North and South Manchuria. Strictly speaking, this is the old-fashioned Chinese method, improved only by the use of modern equipment—screw or hydraulic presses and roller mill, driven by steam.

The first few bean oil mills in North Manchuria were constructed in 1912, and the bean oil industry developed during the Great War, when there was a brisk demand in European countries for beans and bean oil as a substitute for various kinds of diet. With a shortage of bottoms the delivery of oil had the preference of beans. Japan, which during the war had improved its financial position, made increased demands for bean-cakes, thus assuring a satisfactory and favorable market for this product and giving rise to the opening of many new oil mills. At present there are 53 modern bean oil mills in the Harbin area which, if worked to capacity, would consume a total of 3,276 tons of bean daily, and 13 others along the C.E.R. with a daily capacity of 491 tons. But these mills now work only to half of their capacity, consuming only about 490,000 tons a year instead of 1,100,000 tons as they could do if the market were less sluggish. The following is a list of the 53 oil mills in the Harbin district.

Name	Location	Date of Establishment	Equipment	Maximum quantity of bean consumed every 24 Hours, in Tons
Tung Ho	Taoli	1912	40 Screw Presses	39.3
Tung Fa Lung	Patsai	1916	60 Screw Presses	59
Feng Shun Heng	"	1915	80 Screw Presses	72.1
Heng Lung Teh	"	1916	68 Screw Presses	66.8
Tung Kee	"	1913	26 Hydraulic Presses	82.6

Name	Location	Establishment	Equipment	Maximum quantity of bean consumed every 24 Hours, in Tons
Yung Ho Shun	Patsai	1912	56 Screw Presses	54.7
Chiu Ta	"	1920	—	—
Tung Shu Hsiang	"	1916	80 Screw Presses	78.6
Kung Lai	"	1916	20 Hydraulic Presses	68.8
Yi Chung Hsin	"	1915	80 Screw Presses	78.6
Yu Ta	"	1914	60 Hydraulic Presses	207.4
Heng Shun Ho	"	1916	24 Hydraulic Presses	82.6
Yuan Fu	"	1918	76 Screw Presses	68.5
Tung Tsi	"	1917	120 Screw Presses	81.9
Feng Tai Yi	"	1916	100 Screw Presses	98.3
Tien Cheng	"	1913	92 Screw Presses	78.6
Shu Shun Tai	"	1914	72 Screw Presses	72
Teh Hsing	"	1925	24 Screw Presses	33.4
Heng Tai	"	1924	48 Screw Presses	47.2
Tai Yi Cheng	"	1915	80 Screw Presses	72.1
Tung Hsing Chang	Patsai	1924	17 Hydraulic Presses	58.3
Su Sze Ching	"	1922	18 Hydraulic Presses	32.8
Yuan Pu	"	1917	76 Screw Presses	74.7
Tung Kee	"	1923	30 Hydraulic Presses	103.2
Tien Ho Shun	Shangfung	1920	30 Hydraulic Presses	103.2
Wei Yuan	"	1918	30 Hydraulic Presses	62.2
Tung Ya	"	1914	40 Screw Presses	—
Chung Ying Co. (Anglo-Chinese Co.)	"	1914	15 Hydraulic Presses	88.5
Yung Ho Feng	"	1921	100 Screw Presses	98.3
Hsu Sheng Tai	"	1917	80 Screw Presses	62.2
Tung Hwa	"	1920	83 Screw Presses	81.9
Kwang Hsin	"	1920	40 Hydraulic Presses	137.6
Yu Hsing Yi	"	1917	30 Hydraulic Presses	103.2
Shwang Ho Shun	"	1921	40 Hydraulic Presses	137.6
Yuan Hsing Yi	"	1921	20 Hydraulic Presses	68.8
Ho Hsu Kung	"	1921	26 Hydraulic Presses	89.4
Heng Hsiang Kung	"	1923	60 Screw Presses	59
Chang Shun Tung	Liangtai-hsiaotsai	1920	20 Hydraulic Presses	68.8
Teh Shun Fu	"	1921	30 Hydraulic Presses	103.7
Yuan Hsu Hsiang	"	1922	26 Hydraulic Presses	89.4
Yi Chang Jen	"	1919	26 Hydraulic Presses	68.8
Feng Shun	"	1919	40 Screw Presses	32.8

The foregoing mills, totalling 42, are located in the Harbin Special Area, equipped in total with over 550 hydraulic presses and over 1,500 screw presses, and consuming every 24 hours over 3,000 tons of bean. The following mills are at Fuchiatien, in Harbin suburb:—

Name	Location	Date of Establishment	Equipment	Maximum quantity of bean consumed every 24 Hours, in Tons
Shwang Hsing	Fuchiatien	1919	20 Screw Presses	18 Tons
Yi Tai	"	1919	—	—
Tung Hsu	"	1919	21 Screw Presses	20.6
Jui Ho Yu	"	—	—	16.4
Shwang Hsin	"	—	40 Screw Presses	39.3
Kwang Yuan	Teh	—	—	—
Teng Chang	"	—	—	—
Fu Shun Yung	"	—	—	—
Yu Lan	"	—	—	—
Ta Lai Hsing	"	—	—	—
Yung Lai Hao	"	—	—	16.4

Because of the simple manufacturing process which does not require expensive machinery or large buildings the total capital laid down in fixed assets by these mills represents a comparatively small amount—approximately, \$500,000 to \$2,000,000, while the average amount of circulating capital of each mill is estimated at \$50,000. A conservative estimate puts the total of both fixed and circulating capital of these mills at \$5,000,000. It is difficult to make an accurate estimate of the circulating capital of each mill, as the amount varies with market conditions. During a slump the mills contract their working scope and divert funds to other business. It is characteristic of the bean oil industry that a large majority of the mills belong to Chinese capitalists who operate in companies. It may be safely said that the industry is almost monopolized by Chinese capitalists, mainly because in the purchase of raw material, skilful selection of beans has much to do with the output of oil, which ranges from 14 to 19 per cent. according to the variety of bean. Chinese oil mill employees have an exceptionally good knowledge of the beans, which foreigners lack, and their services are highly valued, and always retained in times of depression when other labor is discharged.

The purchase of raw material by an oil mill is of great importance and there are not a few mills which make profits out of shrewd buying at times when prices are fluctuating. It being



impossible to purchase a large stock for a year or a season, the mills have to rely on a sort of gambling on differences. For instance, a mill will sell beancakes forward if the prices are satisfactory, and at the same time covers itself through forward contracts for beans. Thus guaranteed at any rate against almost the total cost of raw material the mill begins to work and waits for buyers of oil in order to cover the cost of manufacture and to realize a profit. Should no new deals materialise, the mill is closed down, as it is only in exceptional circumstances that a mill will prepare stocks.

The bean oil industry, similar to others handling agricultural products, is a seasonal industry. The operation period depends upon the agricultural cycle and begins with the delivery to market of the first season's crop of beans. With the beginning of October, when the beans have been harvested and the farmers are beginning to deliver, the production of the mills continuously increases, with a decline only during the Chinese New Year festival in January and February. With the advent of the spring when the supply of beans is coming to an end and the road conditions become bad, while farmers are required to work on their farms, the production slackens up, to reawaken with the opening of navigation on the Sungari river, by which large consignments of beans are brought to the Harbin market. Between July and September the mills mostly stop for repairs and preparation for the coming season.

The small margin of profit coupled with the insufficiency of operating funds deprives the Chinese owned oil mills of any strength to withstand unfavorable price conditions, which usually compel them to shut down immediately. In such circumstances the mills will not begin operations until they are guaranteed through forward sales of bean cakes, usually in small lots on short terms. A few of the European-owned mills, however, continue their operations throughout the year irrespective of unfavorable market conditions, because they are technically better organized, with more economy in the expenditure of steam and fuel, and supplied with operating funds in proportion to the size of the enterprise. When there is no ready immediate market, they prepare stocks, and, unlike Chinese mills, enter into direct contact with markets of sale. The advantages of mills placed on the basis of Western organization are so apparent that even the most conservative Chinese manufacturers have begun seriously to consider it timely to adopt new methods. But the difficulty of reorganizing their mills along western lines is that it requires capital and knowledge to buy machinery. The Chinese mills are able to maintain their existence mainly through the help rendered by outsiders, especially the Chinese Eastern Railway, which cuts freight rates for the mills. This concession, however, is granted on the condition that the Society of Bean Oil Mills at Harbin devises means for the improvement of their mills.

Beans contain from 14 to 19 per cent. of oil, and the average may be taken as 17 per cent. By the current process of pressing, however, the yield is only 10 per cent. A better result—11-12 per cent.—is obtained only through most up-to-date presses (Anglo-American system), with which only one mill in North Manchuria, the Anglo-Chinese Company, is equipped. The balance of the oil remaining unused in the beancakes represent not only a loss to the manufacturer but also lowers the value of the beancakes, inasmuch as the presence of the oil affects their value as fertilizers. For this reason it is apparent that a mill having the latest equipment has great advantages over others. But the advantages are to a certain extent offset by the higher cost of production. This includes in part the cost of cloth, in which the bean mass is wrapped for pressing instead of in grass. The cloths wear out the more rapidly the higher the pressure is developed in the presses. The preparation of the beans for pressing is also more complicated, because the presses do not receive beans which have only been crushed, as in the Chinese mills, but beans which have been ground

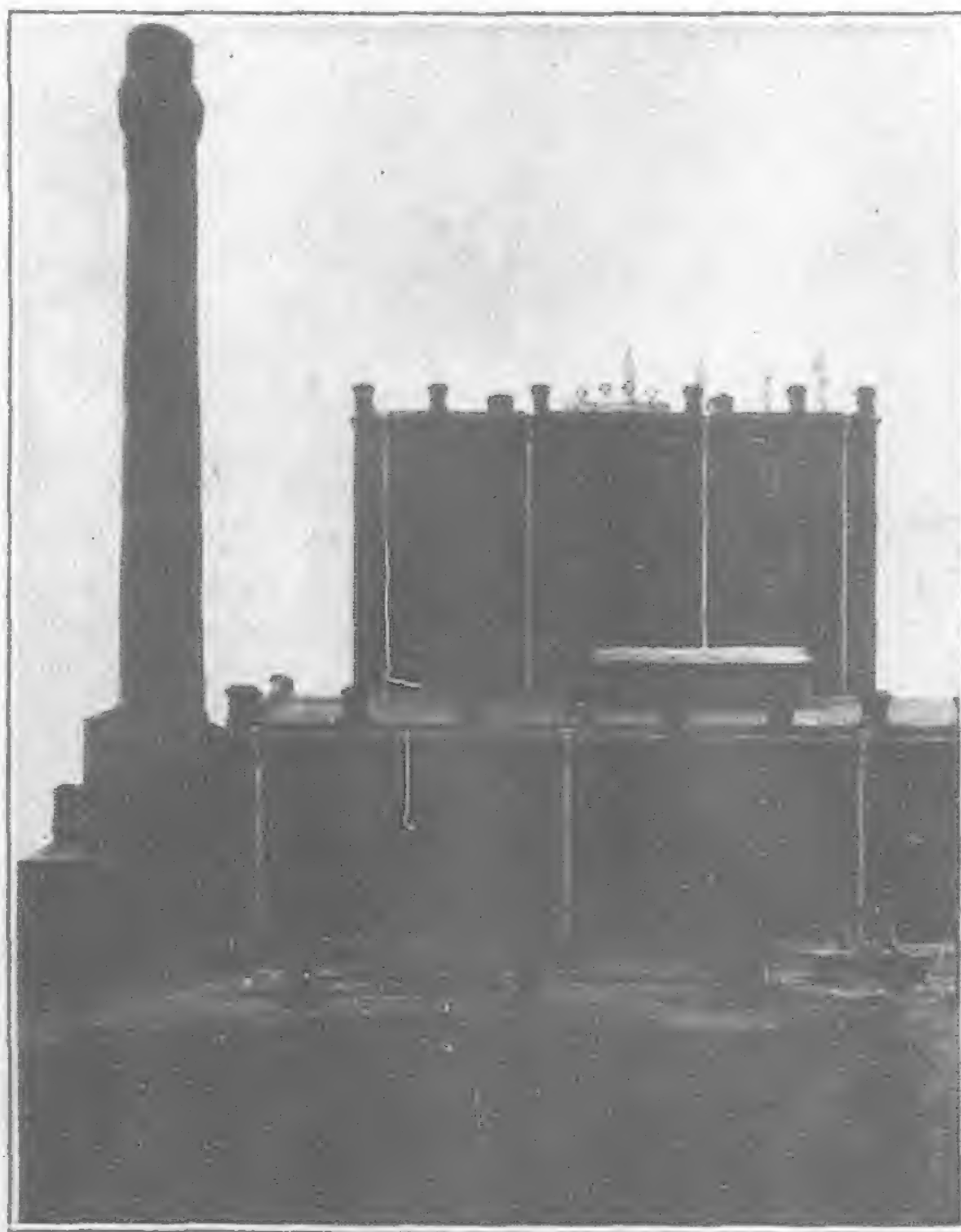
into flour and cleaned of dust and spoiled beans. For this reason the resulting beancakes are very clean in contrast to the round product of the Chinese mills. They have the shape of a thin elongated slab and weigh 15.3 lbs. each. Thanks to their cleanliness and absence of moisture, they stand distant transportation and pass through the tropics without damage.

On the other hand, the beancake produced by the ordinary mills is circular in shape, and obviously contains foreign matter. The standard weight of this beancake, accepted by the South Manchuria Railway for mixed storage, is 70 lbs.

The oil produced by mills with the latest equipment, such as the Anglo-Chinese Company, is also cleaner. The oil is first left to settle, later filtered and finally pumped into iron tanks for storage. Bean oil is a semi-drying oil, which separates chemically and produces free fatty acids when in contact with air, moisture or light. The oil will then have a rancid taste and unpleasant odor. The quality of the oil can be told by its color. Refined oil is almost colorless. Unrefined oil of good quality has a yellowish tinge, while oils of lower grades are recognized by a dark reddish-brown tone. The standard requirements of the European markets, which specify not only the acid contents but also the color, are not yet properly observed by the local oil industry. Yet the necessity of improving the manufacture in this respect is quite evident. It is particularly important that filtration of oil be introduced, inasmuch as filtered oil, in distinction from the unfiltered product, is considerably more resistant to different influences. On the Harbin market only the oil produced by the Anglo-Chinese Company is filtered, the product of other mills being merely settled. With regard to the quality of oil and beancakes, the products of Harbin and Dairen show no difference. The only exception is the product of the special plant in Dairen which was originally organized with funds of the South Manchuria Railway Company and later turned over to a private company. This plant produces oil not by pressing but by extraction.

Beancakes and particularly bean oil find many uses. The beancakes produced by the old-style Chinese mills are employed locally as cattle feed or for fuel. During the War ground beancake was mixed with flour in making bread. In Germany bean flour was made into bread for the army. In Europe, generally, beancakes are employed as fodder. The principal use, however, is as fertilizer, and in this respect Japan is the greatest consumer. In Japan there are over 20 bean oil mills but the output of beancake is not sufficient, and nearly 50,000,000 pieces of round beancake are imported annually. Bean oil is used in China as an article of diet and also for illumination. In Europe and America, in its refined form, it is used in the preparation of preserves, or as an adulterant to olive and other vegetable oils. In 1923 the refining of special oil was begun in Harbin successfully by the local mills, especially the Anglo-Chinese Company, which installed special equipment. The resulting product, known as Acecto, is sold to the local preserve factory and is exported to Transbaikian regions, where it is gradually replacing the more expensive vegetable oils and animal fats. In industrial chemical laboratories it is used for the manufacture of soaps, glycerine, elaine, linseed oil, varnish, stearine, etc., though in all cases the product seems to be of mediocre quality. For instance, in the preparation of linseed oil or varnishes it does not dry sufficiently rapidly. In this defect lies the secret of the low valuation. Bean oil takes the place of vegetable oils whenever there is an insufficient supply of the latter.

With regard to the other product of the Manchurian bean oil industry, beancakes, which represent 90 per cent. of the weight of the beans treated, their price is determined by the Japanese demand for fertilizer. The market being confined to Japan alone, it is natural that their price can never rule high. The finding of more profitable uses for



Chen Chong Flour Mill, Tsi-tsi-har, Manchuria,  
Capacity, 1,000—50-lb. bags per day



bean oil and beancakes is, therefore, a question of paramount interest to the bean oil industry in both North and South Manchuria. Experiments in this direction conducted in Europe and by the North Manchuria oil mills give reason to anticipate the greatest possibilities for the future. A Russian capitalist recently established a small mill at Imienpo and extracts oil from the beans with alcohol. The oil thus produced is free from the odor peculiar to bean oil produced by the usual method, which makes the oil objectionable as a diet. It is also clean and requires little refining. In the case of oil obtained by the pressing method, it must be subject to a process of refining before it is free from foreign substances. The beancake resulting from the extraction method contains a higher percentage of protein, usually from 55 to 60 per cent. and has a greater food value. Such beancakes can be ground into flour and classified into grades for sale in the same manner as wheat flour.

Bean flour is a very nutritious food,\* of which biscuits and bread can be made for the army in time of war. If mixed in suitable proportion with wheat flour, an excellent bread results. But being non-glutinous, bean flour itself cannot be made into bread. In Europe experiments have been made with bean flour and it has been found that owing to the presence of 6-8 per cent. oil contents, which is left behind after pressing, it can only be used to make cakes and other kinds of confectionery, but not bread. In the case of beancakes produced by the extraction method, very little oil contents are left, the quantity being nearly equal to that contained in wheat flour. Hence the beancakes produced by the extraction method will sell better. As food, bean flour is more valuable than wheat flour because of the higher percentage of protein—in the case of cakes produced by the pressing method about 45 per cent.—while wheat flour contains only 12 per cent. Its disadvantage in making bread is its non-glutinous character, which, however, can be remedied by using it as an adulterant to wheat flour. The admixture, containing about 25-30 per cent. of bean flour, will be far more nutritious than pure wheat flour. This is commonly done in England and Germany. Bread made of such an admixture is much cheaper.

The product of the modern style oil mills in North Manchuria are turned out exclusively for export and the oil produced by such mills is gradually replacing the output of the old-style mills, whose number is decreasing. The specific point of industrial utilization of beans is the complete absence of waste. Beancakes plus oil make the same weight as that of the raw material. Therefore the possibility of operating local bean oil mills, if their activity soon passes the narrow sphere of the local market, depends, first of all, upon comparative conditions and the cost of transportation of beancakes and oil on the one hand, and the cost of beans, on the other. The skin of the bean is the ideal packing material for the beancake and the oil contained therein. In bags bean occupies a comparatively small space. On rail it can utilise the entire capacity of the cars. On steamers it is charged for freight by the more advantageous standard of weight and not volume. With the exception of bags, bean requires no special apparatus for transportation and it stands the passage through tropics well. But the transportation of the finished products is another matter. Previous to 1922 the bulk of the oil carried on the Chinese Eastern Railway was packed in primitive Chinese wooden boxes, the cost of which amounted to 10 per cent. of the value of the oil. (A box weighs 36 lbs., contains 252 lbs. of oil and costs from \$1 to \$1.50). The shipper also paid for the carriage of the boxes, which amounted to 14 per cent. of the total freight, while there was also loss of oil amounting to 10 per cent. or more due to leakage. The method of transportation introduced in 1922 by the Chinese Eastern Railway, which provided for the shipment of oil in tanks, eliminated the necessity of special containers, and so cheapened the carriage of this product to Egersheld (near Vladivostok) at which port the railway constructed oil storage tanks. Since then the export movement of oil has turned towards Egersheld, instead of Dairen as formerly. In 1923 the tank carriage method was also adopted for shipments destined for Dairen. The oil was transferred at Changchun to tanks of the South Manchuria Railway, which had followed the example of the Chinese Eastern Railway by installing the necessary equipment. In spite of the evident advantages, the tank shipment method has certain drawbacks. From the point of view of the railway, this method requires special rolling tank equipment, which, as soon as the oil has been unloaded, must make the return voyage empty. In winter the oil freezes *en route*, and at the port, prior to discharge into the storage tanks or steamers, it must be thawed, for which purpose the tanks of the Chinese Eastern Railway are equipped with steam pipes. So far as exporters are concerned, the tank

transportation of oil is possible only in large lots measured according to the capacity of steamer tanks and it is, therefore, not available for small shippers. The chartering of steamers equipped with tanks is also attended with certain difficulties and the freight for oil in bulk is higher than that for oil in containers. Lastly, the oil can only be discharged at ports which are equipped with tanks for receipt of the oil. Notwithstanding such difficulties the introduction of the tank carriage system has greatly simplified the problem of transportation.

The carriage of beancake is also attended with certain difficulties. The round Chinese beancakes are loaded on cars and subsequently on steamers without any packing whatsoever, and in this they have an undisputed advantage over the flat cakes, which, because of their brittleness, must be carried in bags. The round cakes are also subject to breakage, particularly when reloaded. Their greatest defect, however, lies in their becoming mouldy, caused by the presence of a certain percentage of moisture, which cannot be eliminated because of the steaming process by which they are produced.

In view of such difficulties and also of labor shortage and high cost of fuel, the bean oil mills in Harbin have been laboring under great disadvantages. During the War Dairen oil mills multiplied from 20 to 60 and became formidable rivals to the Harbin mills. In order to guard their enterprises against this competition Harbin bean oil millers have sought the assistance and support of the Chinese Eastern Railway and the latter has given their protection to the fullest possible extent. For instance, in 1908, when the basic tariff rates were being worked out, bean products were granted lower rates with a view to attracting to the Chinese Eastern Railway the carriage of bean oil and beancakes produced by the old-style Chinese mills. The real condition, however, did not justify these expectations. While, beginning from 1908, the export of beans grew uninterruptedly and occupied an important place in the total quantity of freight carried by the Chinese Eastern Railway, the transportation of bean oil remained very modest until the beginning of the War, when numerous modern style oil mills sprang into existence and the quantity of bean products carried by the railway increased amazingly. Before the War bean products equalled only 4-6 per cent. of the quantity of raw bean carried, but since 1915 bean products have increased from 65,000 tons to 425,000 tons, equal to about 40-60 per cent. of the raw bean carried. A further increase in bean products has been recorded in the past five years ending 1927. This striking increase in export is due largely to the encouragement given by the Chinese Eastern Railway in the form of low freight.

A brief review of the bean oil industry in North Manchuria in the past few years seems to be not altogether out of place here. In 1920 the mills operated only during the first few months and stood idle during the greatest part of the year, they resumed work only during the last few months when prices of beans were very low. The work proceeded with interruptions also in the beginning of 1921, until April, when the crisis following upon the War made itself definitely felt, and the mills were compelled to discontinue operations entirely, because they were unable to compete with the export of raw beans and also with the Dairen mills, which later on also found themselves in a difficult position. In these circumstances the Chinese Eastern Railway went to the aid of the industry with a number of measures. In November 1921 the freight rates were so revised that the export of oil and beancakes to Egersheld (Vladivostok) became 22 per cent. cheaper than the export of beans. At the same time the transportation in tanks and the equipment of Egersheld with storage tanks placed the export of the oil on a firm footing. The serious crisis of 1921 was weathered without after effects through the efforts of the Chinese Eastern Railway. In recent years a slump has again characterized the oil market. The high tariff levied by Germany on bean products makes it difficult to export large shipments to Europe.

Over 30 bean oil mills are in operation in some seasons of the year or other in Harbin City and they are mostly members of the Society of Bean Oil Mills, which is a representative organization of the local mills. In recent years the Society has gradually developed its activity and rapidly become a sort of a syndicate. It exercises supervision over the member mills in the sale of beancakes and also does such services for the mills as raising loans from the local banks, which would otherwise require the mills to provide two shop guarantees.

\*See, also "The Soybean as Human Food," by Dr. A. A. Horvath, in *The Chinese Economic Monthly*, Vol. III, page 361 et seq.



# Expansion of United States Trade with the Orient

Exports to the Far East More Than Trebled in 18 Years—Raw Cotton Leading Export Item—Increased Imports Reflect Expansion of American Industries—Marked Trade Growth of Smaller Countries

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**A**LTHOUGH there was a decline in United States export trade with the Far East from \$769,681,000 in 1926 to \$744,992,000 in 1927, a loss of 3 per cent., it may be charged to temporary conditions and not to the development of any fundamental adverse trade currents. This is evidenced by comparison with the returns for previous years.

Last year the Orient consumed 15.6 per cent. of America's total exports, practically the same as in 1926, but representing a great gain over the 7.5 per cent. for the average exports during the pre-war period, 1910 to 1914 (fiscal years), inclusive, and a favorable increase over the 14 per cent. of the average for the price-inflated, readjustment period, 1920-1924. Furthermore, American exports to the Orient were approximately 350 per cent. greater than the average for 1910-1914, \$163,787,000; exceeded by 6 per cent. the average for the readjustment years; and was 12 per cent. in advance of the 1925 total.

## Expansion Based on Development of Oriental Countries

While this increase is undoubtedly accounted for in considerable measure by readjustments following European industrial changes, as well as by higher post war prices, its maintenance is firmly based upon the development of the natural resources and the economic progress of oriental countries. Higher standards of living, combined with a greater degree of prosperity, are stim-

ulating a steady demand in the Far Eastern area for both raw and manufactured materials which the United States is well able to supply.

## Marked Advance in Smaller Countries

It is interesting to note the rapid growth evidenced by countries in the group which were regarded as least important commercially in earlier years. The combined annual average of United States exports to five countries—Japan, China, India, the Philippine Islands, and Australia—represented 90 per cent. of our total shipments to the Orient during the five-year period 1910-1914. In return these countries supplied 80 per cent. of the imports. Since then, however, the smaller countries, Netherland East Indies, New Zealand, Malaya, Ceylon, Siam, and Indo-China, have forged ahead until, in 1927, these ratios were reduced to 87 and 67 per cent., respectively.

## Exports to Leading Countries Compared

Chart I compares the share of each of the seven most important countries for 1927 with the annual average for the two periods, 1910-1914 and 1920-1924.

In 1927 the Netherland East Indies bought approximately ten times more American merchandise than the average for the pre-war period. Fully one-fifth of the total went for automobiles, not only to serve the tourist traffic but also to provide increased

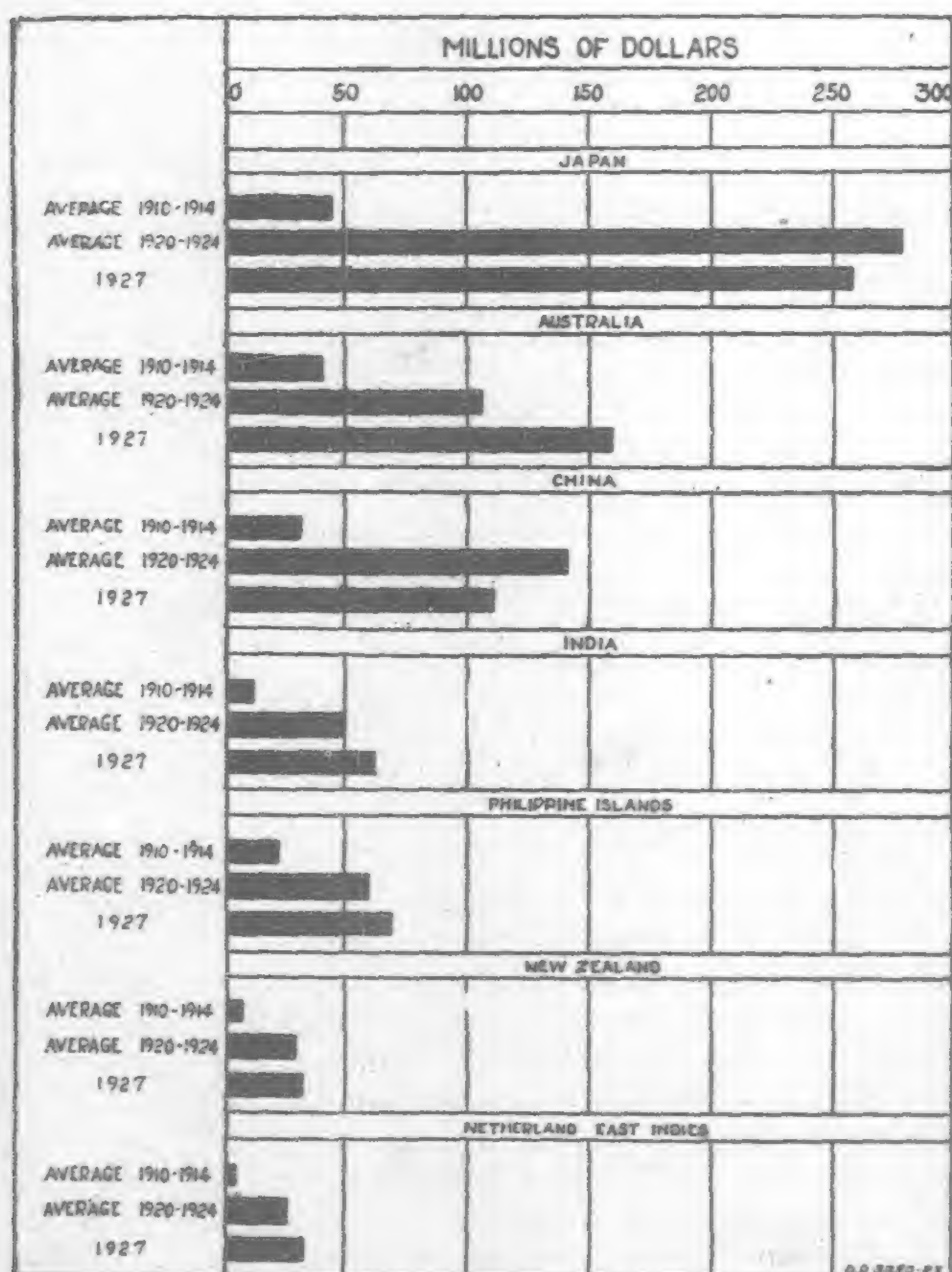


CHART I.—Comparison of total exports to principal countries of Far East for 1927 with average for 1910-1914 and 1920-1924

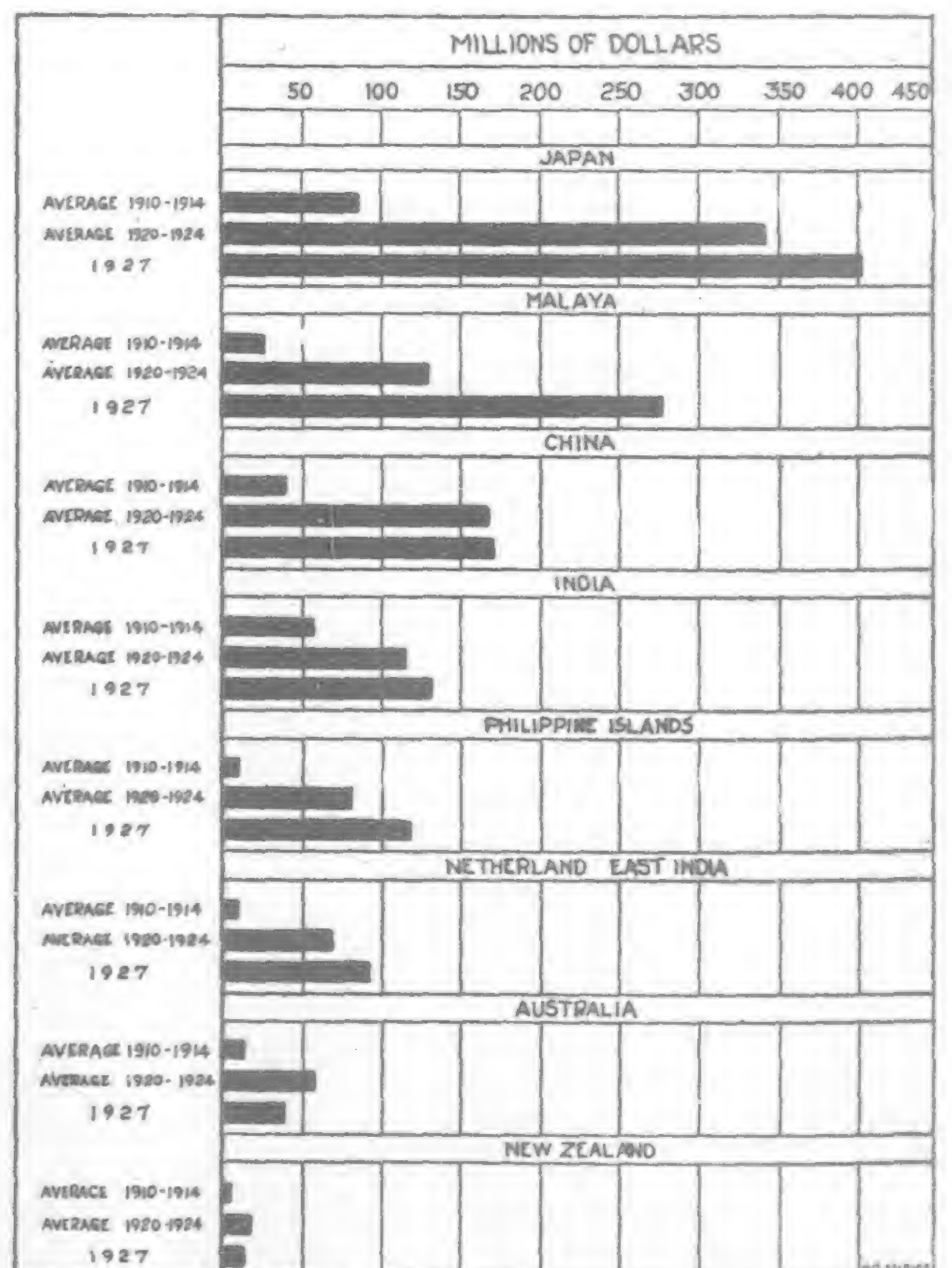


CHART III.—Comparison of total imports from principal countries of Far East for 1927 with average for 1910-1914 and 1920-1924



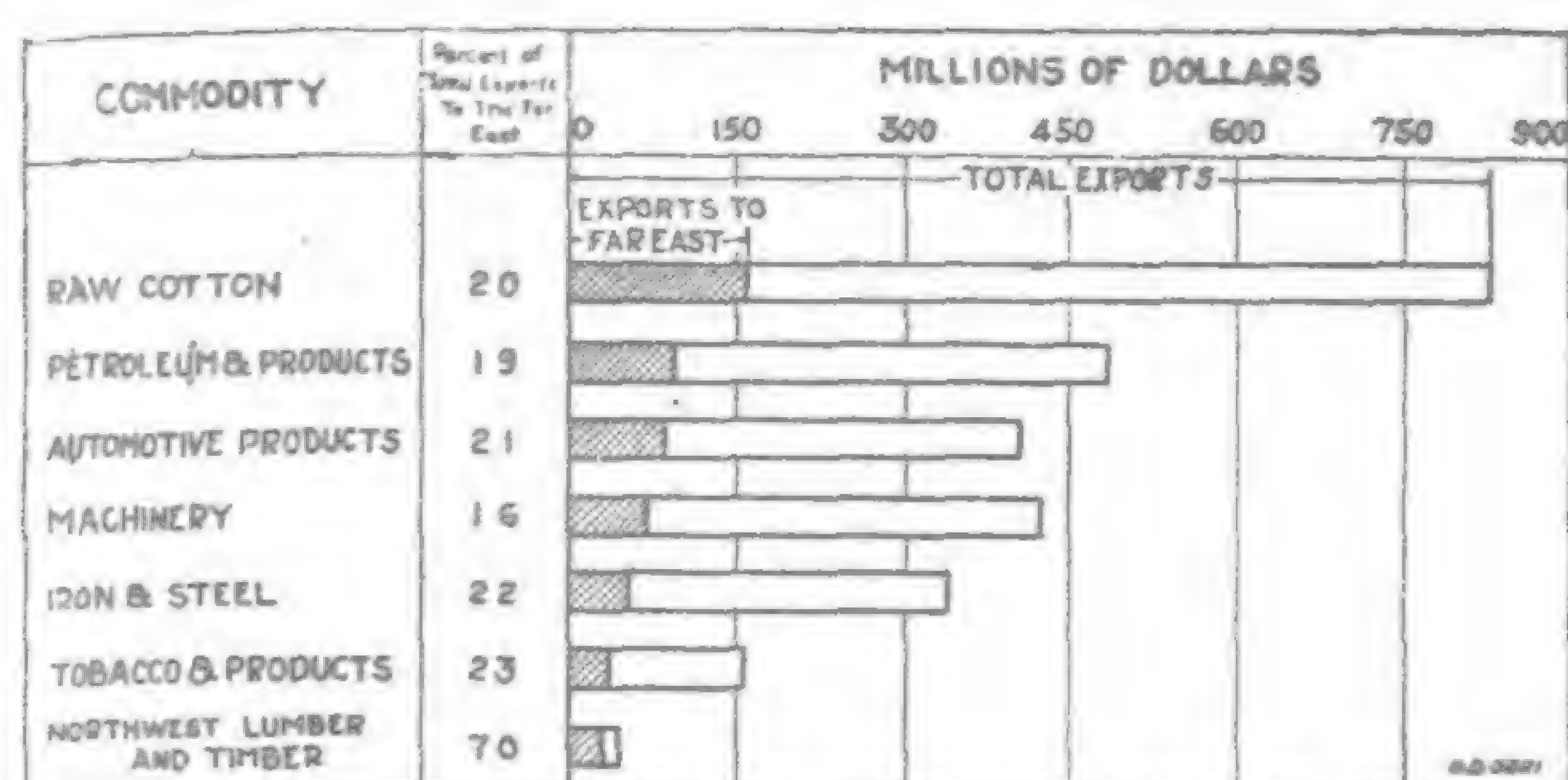


CHART II.—Comparison of seven leading exports to the Far East in 1927 with total for each commodity. (All figures subject to correction)

transportation facilities to promote the development of the country's resources. Machinery accounted for 21 per cent. of the total and iron and steel 13 per cent.

### Trade with India and Japan Increased Fivefold

Raw cotton ranked highest among the commodities entering into trade with India, which advanced more than fivefold as compared with the 1910-1914 average. Refined mineral oils constituted one-fifth and automobiles one-seventh of the total while machinery comprised 11 per cent. and steel 7 per cent. Exports to Japan, practically five times those of 1910-1914, centered about raw cotton, which accounted for nearly one-half of the total value. Iron and steel, machinery, lumber, and petroleum together aggregated 28 per cent., with iron and steel leading.

### Sales to Australia Gained 300 Per Cent.; to China 240 Per Cent.

The expansion of more than 300 per cent. in sales to both Australia and New Zealand since the pre-war period must be attributed mainly to the increased demand for automobiles, gasoline, machinery, and iron and steel. Notwithstanding the long-continued trade disruption in China, the Chinese consumption of American products in 1927 was 240 per cent. in excess of the pre-war average. Most important increases occurred in the case of leaf tobacco, cigarettes, petroleum, raw cotton, machinery, and iron and steel, which at present make up more than 50 per cent. of the American merchandise sold to Chinese markets. Advances for the remaining countries included a 500 per cent. increase in the case of Ceylon, 400 per cent. for Siam and Indo-China, and 375 per cent. for Malaya.

Last year each country in the Far Eastern area, except Japan and China, bought more than the annual average for 1920-1924; and the abnormally high value of Japan's purchases during that period was attributable both to the inflated prices of 1920 and the requirements for reconstruction after the earthquake.

### Leading Exports Compared

In 1927 seven commodities—raw cotton, petroleum, automobiles, machinery, iron and steel, tobacco, and lumber—accounted for nearly 75 per cent. of United States exports to the Orient and more than 10 per cent. of the total shipments for the year. Chart II, which shows the value of each article listed and its relative share in the total exported from the United States, reflects to a considerable extent the development of Far Eastern industries providing

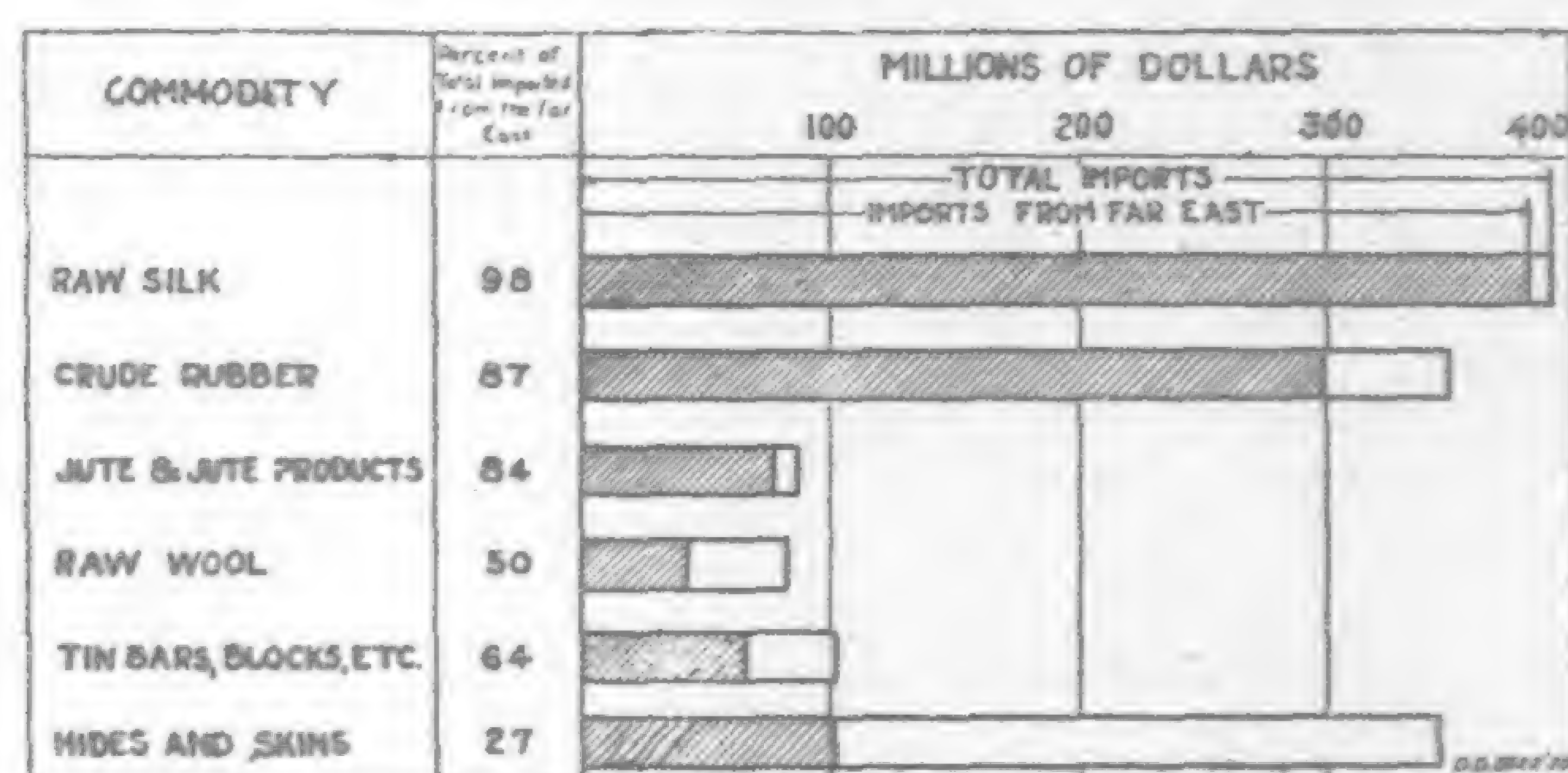


CHART IV.—Comparison of six leading imports from the Far East in 1927 with total for each commodity. (All figures subject to correction)

a market for both raw and manufactured American products. The figures become more significant when it is realized that these same commodities constituted only 4.2 per cent. of the total United States exports to all countries in the pre-war period and but 50 per cent. of the total shipments to the Far East. During the fiscal years 1910-1914, inclusive, the United States sold to oriental countries annually an average of \$4,000,000 worth of automobiles and lumber, \$11,000,000 of machinery, \$8,000,000 of tobacco and cigarettes, \$20,000,000 of raw cotton, \$21,000,000, of iron and steel, and \$26,000,000 of petroleum.

### Notable Development in Imports

On the import side development has been even more notable. In 1927 the United States bought approximately four times more from Japan than before the war, and eleven times as much from the Netherland East Indies and Malaya. Purchases from Australia and India have more than doubled and from the Philippines are more than fourfold the pre-war average.

Chart IV, which shows the value of the six leading imports into the United States from the Far East, and the ratio of each to the total purchased abroad, reflects the activity of some leading American industries and their dependency upon oriental sources for raw materials. In 1927 the value of these six commodities represented not only 70 per cent. of the United States imports from this area but also 20 per cent. of its total from all countries. The value of our imports of silk from the Orient in 1910-1914 averaged \$62,000,000; of rubber, \$7,000,000; jute and jute products, \$34,000,000; wool, \$18,000,000; and hides, \$19,000,000.

### Outlook Generally Encouraging

The outlook for 1928, on the whole, may be considered encouraging. United States interests are well organized. Japan's affairs are assuming a brighter aspect. China's markets are uncertain but the situation is quieter, and depleted stocks of foreign merchandise, which in many cases are dependent upon the American supply, will require replenishment. General conditions, combined with different projects for improvement and increased shipping facilities from the United States to the Orient, are revealing possibilities in southeastern Asia. India gradually has adjusted its commerce to higher postwar prices and its industries are reviving slowly. Its exchange also has been stabilized and credit strengthened, while five good monsoons have increased its purchasing power and stimulated interest in plans for development. American goods continue popular in Australia and New Zealand although higher tariffs may tend to curtail sales along certain lines.

### Land Expropriation for Roads

Kiangsu provincial authorities have recently drawn up regulations governing the acquisition of land for construction of highways. Land is classified as Government-owned Public and Private. Mission property is to be dealt with as private land. Any land required for a road is to be staked with sign posts and represented on a sketch map for examination and approval by the Construction Department, before notice is sent to the owner for acquisition. Government land is taken without compensation and public and private owners will be compensated on production of title-deeds and other documents. While projected roads are to avoid as far as possible spots noted for scenic beauty or historic associations, or densely popula-

ted, the land at such places, when absolutely necessary, is also to be acquired. After receipt of official notification regarding land staked out, the owner cannot sell it or build or bury thereon. For compensation a land valuation commission of over five members, locally selected is to be organized, with the district magistrate as chairman. For removal of buildings, graves, etc., from acquired land, the local officials must give the owner two months' notice, and compensation for the expenses to be incurred in this connection. Special reward or encouragement is to be given to owners who voluntarily forego ownership of land or the buildings thereon.



# Electricity in Japan

## Electric Enterprise Extending its Activity as Important Factor in Industrial Development

**E**LECTRICAL enterprises in Japan were commenced for the first time in July, 1886, when the Tokyo Electric Light Company (established in 1883 and capitalized at Y.200,000) constructed a 25-kw. steam power plant and supplied electric lights within a limited area of the city of Tokyo.

The electric light supply enterprise was soon afterwards started at various other cities of this country. The Kobe Electric Light Company was established in 1888, followed by the promotion in 1889 of the Osaka, Kyoto, and Nagoya Electric Light Companies. In 1892, there were 11 electric light companies, with an authorized capital which reached Y. 2,470,000.

In those days, however, the charges for electric light were quite high in comparison with the expenses of kerosene oil-lamps, and therefore, the electric lights were not very popular.

### Water as Power Source

After the Sino-Japanese War (1894-5), the market price of coal registered sharp advances, so much so, that the operation of steam power plants became disadvantageous, eventually giving rise to the hydro-electrical enterprises.

At the time of the Sino-Japanese War, however, there were only five companies which planned the construction of hydro-electric power plants. Included among these companies were the Maebashi Electric Light, the Kiryu Electric Light, the Toyohashi Electric Light, the Fukushima Electric Light, and the Sendai Electric Light Companies.

Furthermore, these hydro-electric power plants were located at points not very far from the urban districts where the power was actually consumed. It was after the Russo-Japanese War (1904-5) that hydro-electric enterprises became popular in Japan.

During 1906-7, many hydro-electric power companies were promoted in rapid succession, so much so that their number exceeded that of steam power companies in 1908. Prior to the outbreak of the Russo-Japanese War, the number of steam power companies was decidedly larger than that of the hydro-electric power companies.

### New Companies

Included among these newly-established companies are the Ujigawa Electric, the Hakodate Hydro-Electric, the Hakone Hydro-Electric Power, and the Nagoya Electric Power Companies which were established in 1906, and the Fuji Hydro-Electric, the Jomo Hydro-Electric, the Niigata Hydro-Electric, and the Tokushima Hydro-Electric Power Companies which were founded in 1907.

The accompanying list shows how the number of steam and hydro-electric power companies increased during the six years ending 1908, classified according to whether the companies were opened for business or were not:

#### HYDRO-ELECTRIC POWER COMPANIES

Years	Opened for business	Not opened for business	Total
1903	42	19	61
1904	45	13	58
1905	51	14	65
1906	59	23	82
1907	70	33	103
1908	84	33	117

#### STEAM POWER COMPANIES

Years	Opened for business	Not opened for business	Total
1903	49	14	63
1904	54	9	63
1905	53	9	61
1906	47	17	65
1907	46	28	74
1908	51	31	82

The hydro-electrical enterprises have made further developments since the European War started in 1914, to such an extent that a golden age for the hydro-electrical undertakings has been created.

### Rivalry for Water Sources

The manufacturing industries in Japan witnessed an unprecedented prosperity during the great war boom, stimulated by the heavy increase in the demand and by the subsequent sharp advances of the market prices. In order to meet the increased demand, the manufacturers incessantly extended the capacity of their factories, resulting in an enormous increase of electric power consumption.

The increased consumption of electric power, plus the steady rise of the market price of coal, gave rise to promotion of hydro-electric power companies everywhere, and then, these companies entered a severe

competition for securing the right of developing hydro-electrical water sources.

The hydro-electric power companies, which were established in the early stage of the development of this industry, had a rather small amount of capital, and their enterprises, too, were carried out on a relatively small scale. But, the companies established during and after the European War were capitalized at immense sums. The old companies, then, increased their capital, or extended their business by means of amalgamating with other companies.

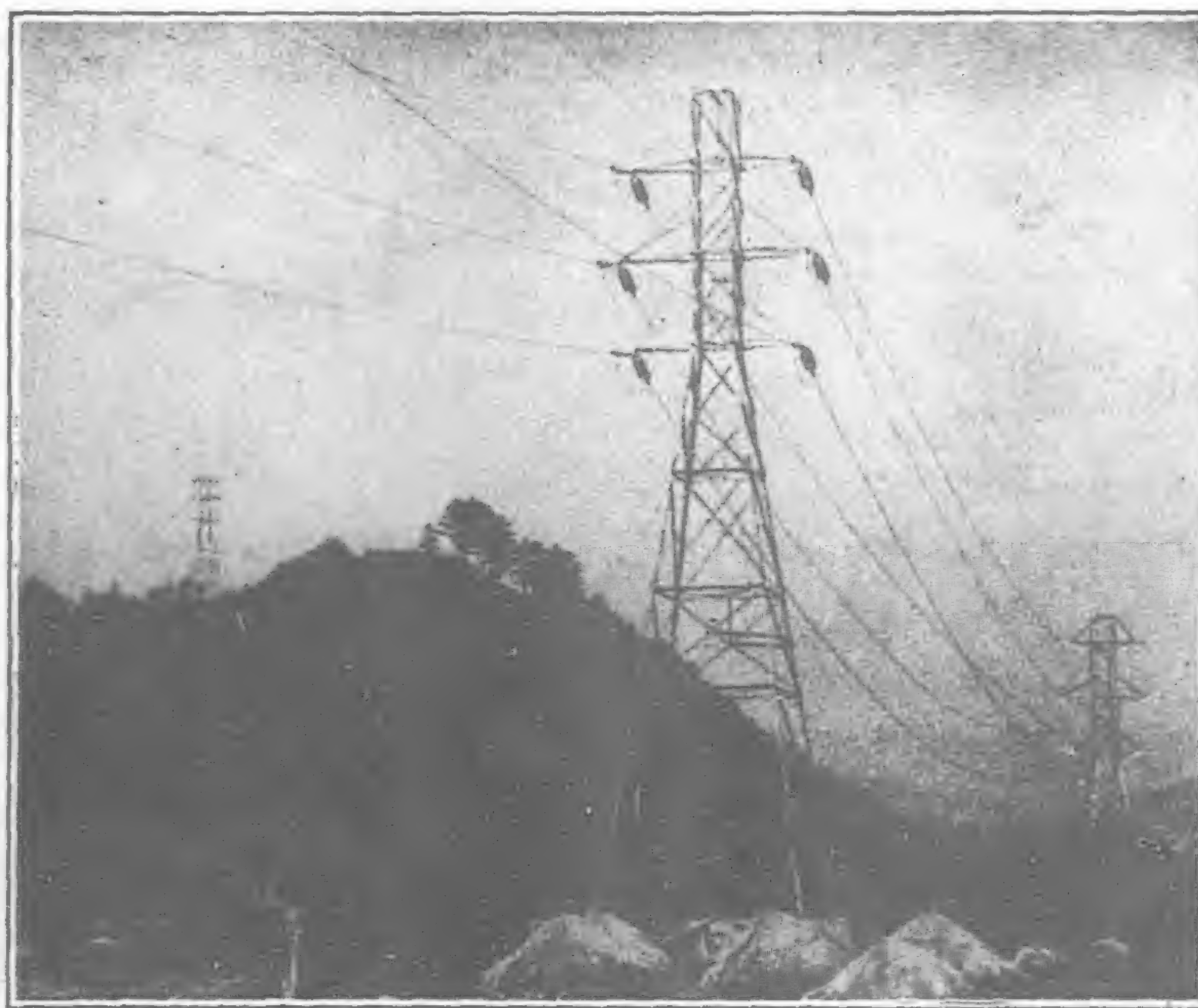
Reflecting the foregoing circumstances, the number of electric companies did not show much increases, despite the fact that a large number of new companies were promoted during the war boom because the active amalgamation of minor companies with others decreased the numbers.

So far as the electric power generated by these companies is concerned, however, it showed a tremendous increase during the period under review. At the end of 1926, the capacity of the completed power plants, inclusive of both steam and hydro-electric, stood at 2,923,000-kw. When the capacity of the power plants then under construction is added, the aggregate total amounted to 4,566,000-kw.

### Power Generation Rises

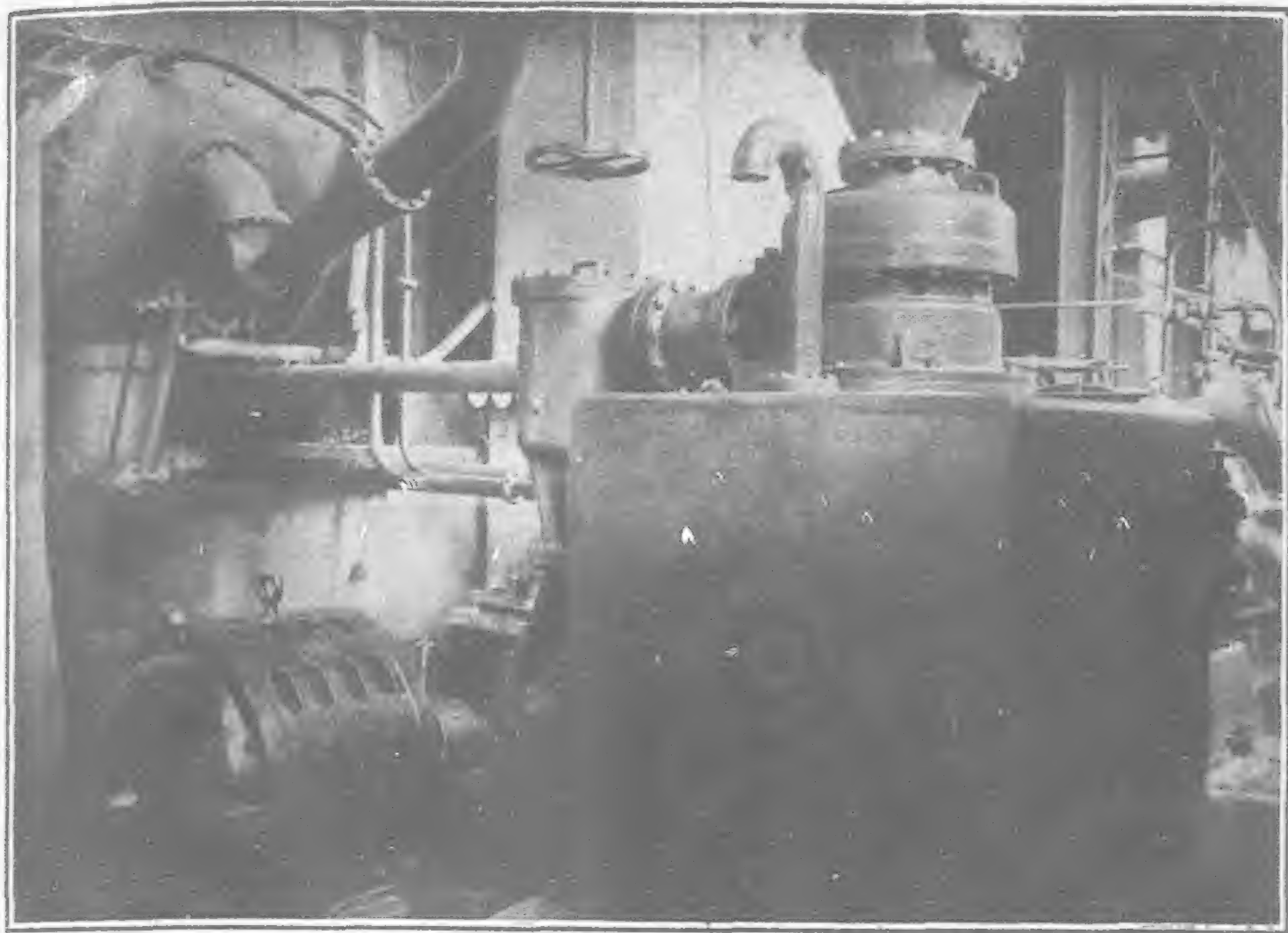
The following table shows the annual development of the capacity of the finished power plants: (Unit: kw.)

	Hydro-Electric	Steam	Total
1912	233,339	228,864	462,203
1916	469,634	333,655	805,289
1921	914,744	611,974	1,526,718
1922	1,070,060	709,112	1,779,173



A 194-Mile Transmission Trunk Line Between Osaka and Sasatsu, of 154,000 Voltage





Condensing Plant (II) for 8,000 K. W Parsons' Turbo-Generator.  
Mitsubishi, Nagasaki Works

				Hydro-Electric	Steam	Total
1923	...	...	...	1,307,706	755,079	2,062,785
1924	...	...	...	1,474,357	763,146	2,227,503
1925	...	...	...	1,813,508	954,633	2,768,141
1926	...	...	...	1,902,000	1,021,000	2,923,000

As shown in the foregoing table, the percentage of the capacity of the hydro-electric power plants compared with the total capacity was 50.5 per cent. and that of the steam power plants was 49.5 per cent. in 1912. In other words, the capacity of the hydro-electric and the steam power plants were about equal.

In recent years, however, particularly at the end of 1926, the capacity of the hydro-electric power plants exceeded that of the steam power plants, and their percentage compared with the total capacity became 65.1 per cent. and 34.9 per cent. respectively.

This is due chiefly to the geographical advantage of the hydro-electrical undertakings in Japan. It is said that the water sources in Japan are capable of developing to the extent of 10,000,000-kw. The rise in the price of coal, however, is also partly responsible for the remarkable growth of the hydro-electrical undertaking.

In comparison with the hydro-electrical enterprises, the increasing percentage of the capacity of the steam power plants is small. Nevertheless, so far as the steam power plants themselves are concerned, they have also made great progress in this respect.

The construction of steam power plants has not ended, in spite of the remarkable development of the hydro-electrical undertakings, because they are built as reserves for emergencies such as when the volume of water in the rivers falls. The capacity of the steam power plants at the end of 1926 had increased to about three and a half times as much as that of 1912.

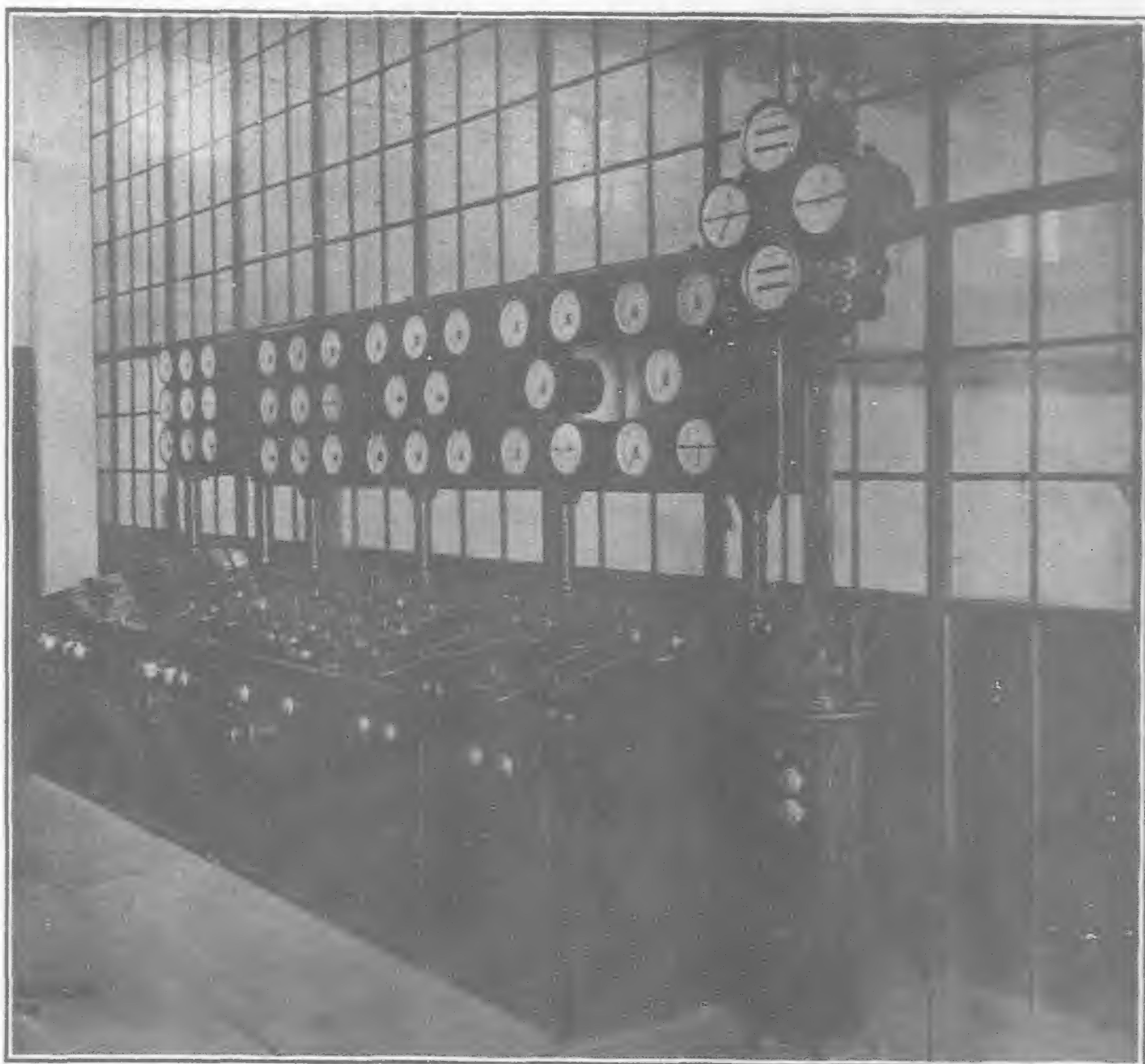
## Electric Light Supply

In proportion to the development of civilization, and also, to the decline in the charges, the demand for electric lights has quickly increased. At the end of 1925, the number of houses furnished with electric lights totalled 9,652,000, the number of lights supplied, 27,320,000, the candle power, 461,073,000, and the electric power required in this connection amounted to 574,000-kw.

Compared with 1912, the number of houses furnished with electric lights at the end of 1925 represented an increase of 1,080,000, the number of lights increased by 23,220,000, and the electric power required also rose by 456,000-kw. The candle power per light also showed an advance of 77 per cent.

The following table gives the details of the progress made by the electric light supply enterprise from 1912 until 1925: (Note: A. stands for the number of houses, B. for the number of lights, C. for the average candle power per light, and D. for the electric power required for light supply. Three zeros are omitted for A. B. and D.)

				Years	A.	B.	C.	D. (kw.)
1912	...	...	...	1912	1,565	4,094	9.5	118
1916	...	...	...	1916	3,744	9,035	10.8	181
1921	...	...	...	1921	6,985	18,114	14.1	327
1922	...	...	...	1922	7,899	20,522	15.0	401
1923	...	...	...	1923	8,305	21,687	15.4	430
1924	...	...	...	1924	8,796	24,447	16.5	556
1925	...	...	...	1925	9,652	27,320	16.9	574



Main Switchboard for 8,000 K. W. Parsons' Turbo-Generator. Mitsubishi, Nagasaki Works



### Power Supply

The consumption of electric power as the motive-power in manufacturing establishments has also registered a remarkable increase. At the end of 1925, power demanded for operating electric motors totalled 688,000 kw., other apparatus, 163,000 kw., and the selling of power to electrical enterprisers, 1,141,000 kw, making a total of 1,992,000 kw.

The foregoing increase in the power supply is attributed to the recent progress made by the electro-chemical industries, operation of electric railways, the electrification of the steam railways, the domestic adaptation of electric heat, the application of electric power in the farming villages, etc.

The following table shows in detail the increasing tendency of the electric power supply: (Unit: 1,000 kw.; A. stands for the power required for operating electric motors, B. for the power required for operating other apparatus, and C. for the power sold to fellow electrical enterprises).

Years	A.	B.	C.	Total
1916 ...	175	19	219	413
1921 ...	453	74	538	1,065
1922 ...	522	73	645	1,240
1923 ...	544	53	770	1,367
1924 ...	638	109	978	1,726
1925 ...	688	164	1,141	1,993

### Details of Investments

Investments in the electric light and power supply enterprises as well as in the joint enterprises of operating electric railways and at the same time supplying electric lights and power have increased enormously in recent years in due proportion to the development of such undertakings.

The following tables give details of the investments: (All in Y. 1,000).

#### (1) Electric light and power supplying enterprise:

	Authorized capital	Paid up capital	Profit	Percentage of profit (Unit per cent.)
1914 ...	276,912	199,861	17,997	9
1916 ...	299,662	224,556	26,284	10
1921 ...	866,634	546,295	67,967	12
1925 ...	1,002,404	765,017	87,535	11

#### (2) Electric light and power supply, and electric railway operation enterprises.

	Authorized capital	Paid-up capital	Profit	Percentage of profit (Unit per cent.)
1914 ...	268,348	234,893	11,093	5
1916 ...	302,686	264,390	19,293	7
1921 ...	837,063	615,686	77,663	13
1925 ...	1,572,261	1,299,439	151,483	11

#### (3) Debentures, financial accommodations secured, and reserves of the electric light and power supply companies.

	Debentures and Loans	Reserves
1914 ...	57,951	9,416
1916 ...	53,641	14,085
1921 ...	181,584	35,292
1925 ...	504,367	45,084

#### (4) Debentures, financial accommodations secured, and reserves, of the electric light and power supply and the electric railway companies.

	Debentures and Loans	Reserves
1914 ...	35,768	4,639
1916 ...	50,889	6,945
1921 ...	81,111	31,672
1925 ...	493,720	65,847

All the figures, as is evident in the foregoing tables, show remarkable increases.

As regards the business condition of these companies in recent years, the following table gives the paid-up capital, profits, and

dividends of several influential electric companies which specialize in the supply of light and power: (All in Y. 1,000.)

#### TOKYO ELECTRIC LIGHT COMPANY

Date	Paid-up capital	Profit	Dividends (Unit per cent.)
May., 1926	345,536	18,633	11
Nov., 1926	345,691	18,824	9
May., 1927	345,724	18,660	9

#### UJIGAWA ELECTRIC COMPANY

Sept., 1926	52,274	3,545	10
Mar., 1927	57,274	3,689	10
Sept., 1927	59,775	4,007	10

#### TOSHIN ELECTRIC COMPANY

Sept., 1926	14,500	1,064	12
Mar., 1927	16,187	1,291	12
Sept., 1927	16,187	1,203	12

#### YAHAGI ELECTRIC POWER COMPANY

Sept., 1926	7,508	720	13
Mar., 1927	8,875	763	13
Sept., 1927	8,875	904	13

#### DAIDO ELECTRIC POWER COMPANY

May, 1926	112,963	6,929	10
Nov., 1926	112,963	7,215	10
May, 1927	112,963	6,718	10

#### NIHON ELECTRIC POWER COMPANY

Sept., 1926	62,500	3,317	9
Mar., 1927	62,500	3,400	9
Sept., 1927	75,000	3,607	9

### Foreign Loans

The electrical companies in Japan constantly find themselves in need of extending their undertakings, and this cannot be done without funds. Consequently, they increase their capital continuously, and in addition, they issue loans in the domestic money market. The capacity of the domestic money market, however, is limited, and therefore, these electrical companies find it inconvenient to be dependent upon the domestic market only, hence the flotation of loans abroad.

The Toho Electric Power Company, the Daido Electric Power Company, and the Ujigawa Electric Power Company and some others recently issued debentures in the American and British bond markets, and the attempt proved a success. The indications are that there are some more electric companies which are planning to issue loans in the American market.

In October, 1927, Mr. Thomas Lamont of the J. P. Morgan Company visited Japan. His visit was welcomed by all the electrical magnates in Japan.

Mr. Matsunaga, president of the Toho Electric Power Company, handed to Mr. Lamont a statement concerning the future possibilities of the electrical enterprises in Japan, and this fact attracted much attention among others in Japan interested in electrical undertakings.

**Roads in Kweichow.**—Concerning the construction of roads in Kweichow province, a German recently observed that the voluntary work of the people was amazing. In less than six months thousands of people under the guidance of provincial officials completed the unfinished 800 li road from Kweiyang, to Chihshui and constructed the 300 li new road from Kweiyang through Anshun to Hwangko rapids. In February work was started on the 500 li road from Kweiyang to Nantan, Kwangsi province, and in less than three months, 80 per cent. of the work was finished. The people of Chenyuan and Tungjen have petitioned the provincial government to survey another road so that work may start immediately after harvest time. This shows that the people realize the importance of better transportation facilities and that they are willing to work under proper direction without pay and with their own implements.



# Ford Company Builds First Auto Factory in China

Assembling Plant Erected At Pootung Capable of Producing 590 Cars A Month

By James Hoeck



MOTORCARS and the efficient gasoline age are taken too much for granted nowadays. But it was not so very many years ago that America was without autos or roads worth boasting about. Quite suddenly the country began to move on wheels. Mass production proceeded apace with mass consumption and factory methods were applied to the output of the auto, at first only a few cars a month, and finally the specialization of Henry Ford and a few of his competitors made a flivver drop out of the slot every few seconds.

China to-day is where America was in automotive development about the time when the manufacturers first turned to making parts in quantity. The demand is just beginning to justify mass production for the market here. And Ford is the pioneer, in China as in Japan, where the small cars

are actually beginning to replace the ricscha. The building just erected at the Robert Dollar Wharf on the Whangpoo River just opposite Shanghai is, of course, only an assembling plant, but it deserves to be ranked as the first auto factory ever to be established in China, whatever the dictionary limitations of the word.

The plant erected at Pootung to accommodate the expanding China market will have a capacity of 500 cars a month, and this

factory is only the beginning of a program of development anticipated by the Ford Company in the next few years. The market here is expected to open up much as it did in Japan, and the Ford executives in Shanghai, of which Mr. T. H. Lowry is the head, are approaching the problem of meeting the demand in much the same way.

The plant to serve the China area is on a par in size and capacity with the small factory first constructed by the Ford Company in Yokohama in 1924-25. This Japan plant, originally designed to

turn out 25 cars a day, has since moved to a larger site and increased its production to 1,000 cars a month, and with the increased demand for the popular 1928 model, it will probably go beyond this.

The Shanghai assembling plant, which in a few months will be operating at the rate of 500 cars a month, will probably handle most of the cars

of this new model already ordered in this territory. Shanghai will thus become the central distributing point for all the Fords that are sold in China, instead of the previous direct shipments of cars that frequently have been made to Tientsin and Hongkong and other cities. Henceforth cars will be distributed from the Shanghai plant that may be destined for points even so far distant as Mongolia or Tibet.



Front View of New Ford Assembling Plant at Pootung



In the Process of Construction





Interior View of the New Plant

The building for the new assembling plant, lying at one end of the Dollar wharf, so that it is convenient for the direct loading and unloading of cargo from ocean vessels, which conceivably will be a part of the fleet owned and operated by the Ford Company, is as light and airy as a modern school-room. In area it is 80 by 300 feet and is built of concrete and beams, 18 bays in length and three in width. The bays in the walls on the sides are 16 feet, 8 inches each and of those across the ends, two on the outside are 24 feet, 4 inches, and the center bays, 28 feet, 4 inches.

The foundations are concrete throughout with brick walls and a frame roof covered with galvanized corrugated iron. The building is fitted with Bayley-Springfield steel windows and doors that are 15 feet wide and 12 feet high. Richards-Wilcox hardware has been used in the construction, while all the material has been supplied by Andersen and Meyer. The building, which went up in six months' time, was completed early in April.

Much the same system as that used in the large factory in Detroit, where 11,000 of the new cars may be turned out daily, will be employed in Shanghai in trundling between two and three cars an hour out of the Pootung factory. Nearly 200 employees will be at work when the plant is running at full capacity, much of the machinery already having been sent out from America. A wage scale higher than the prevailing level is to be adopted here as in other Ford plants and the men will all be carefully picked and trained for their tasks

by skilled foreign and Chinese mechanics. Following the example set forth in Japan and other foreign countries, Chinese will likewise here be given executive positions in the establishment. Another innovation which has been welcomed by the motor world of Shanghai generally will be the opening of a school for mechanics, to be run co-incidentally with the factory, educating Chinese not only to fill posts in the assembling plant, but to care for the cars wherever they may be put into use.

Marking a very definite milestone in the industrial development of China, this new Ford factory at Pootung is a considerable step towards fulfilling the vital needs of China for better methods of communication, for raising the standard of living in replacing the wheelbarrow and the ricksha by modern methods of transportation. Even before the present plant is put into full operation, the Ford Company is looking to the future, when a larger site and a factory with a bigger capacity must come abreast of the increasing demand for the cars of this make and the widening uses that will be found for them as more roads are built in China. For in this country undoubtedly

the demand will some day be double or treble that created in Japan. The factory of the not-far-distant future in China may be turning out 20,000 cars a year.

That, however, is in the very hypothetical future. At present the Ford Company has merely laid the foundation for a large-scale enterprise, and has taken this positive step due to the certainty in the demand here, after many long delays owing to disturbed conditions. The imports of automobiles, generally considered an index of prosperity, gradually have been rising in China, and each year sees a few hundred miles of roads added. So far only the fringes of China have been opened to the automobile, but the vast interior cannot much longer be kept motorless, nor can the large ocean and river ports remain unlinked by road.



Situated on the Water Front

### Teikoku Kayaku Kogyo K.K. (Imperial Explosives Industry Co., Ltd.)

Since the Washington Conference orders from the Navy have been stopped and the company has been devoting all its capacity to the manufacture of dynamite. Originally established with a view to supplying special explosives to the Navy, the company received technical advice and assistance from the Navy as to its equipment. Naturally the company's products are said to be better than other companies'.

During the first few terms after the orders from the Navy were suspended the company had to sell at a sacrifice in order to develop sales. For last term profit was expected to show an increase, as sales had increased considerably, but actual results did not come up to expectation. In September last year the Military Arsenal had reduced its sales price on dynamite by Y.4 a case (of 6 kan) and the market which was controlled by the policy of the Arsenal, had to follow the lead. Before this reduction the company was selling at Y.30.80 a case, realizing a profit of Y.2 to 3, but after this

heavy reduction has been suffering a loss. The company made every effort to cope with the situation by retrenching expenses and so on, and the possible loss was made up last term.

The military authorities lowered the sales price under a pretext of checking imports, but the real motive was, it seems, to protect their own interests, as they feared the effect of competition with private companies. This policy was hotly censured, but no measures have been taken and the market remains unimproved. This term the effect of the reduction will be felt through the term and a loss is considered inevitable, in spite of efforts made to lower the cost of production. Moreover, production cannot be increased as dynamite deteriorates after long storing.

Under the circumstances, improvement will be impossible unless the military authorities change their policy to help private companies, rather than to compete with them.



# Engineering Notes

**Hong Kong Enterprise.**—According to "The Times" it is officially announced that the Imperial Government is contributing £100,000 towards the cost of establishing a civil and military aerodrome at Kaitak, near Kowloon City.

**Kumagawa Denki K.K.** (Kumagawa Electric Co., Ltd.)—It is reported that the company has applied to the authorities for a license to build a new power station on the upper stream of the Hishita Main River in Nishi Shifushi Mura, Soo Gun, Kagoshima Prefecture. The projected water way is 388 ken long, and the water flow is estimated at 250 cubic feet a second, theoretical horse power 3,580 h.p. or 2,000 k.w.

**Ujigawa Denki K.K.** A New Substation.—The company is now constructing a new substation at Yawata Machi, in Shiga Prefecture, capacity 6,000 k.v.a. Equipment has been ordered from the Hitachi Engineering Works, to be delivered some time in August this year. Power will be transmitted from Uji Power Station at 55,000 volts, to be reduced to 22,000 volts at the new substation, to be supplied in the Omi Branch District.

**Hakata Denki Kido K.K.** (Hakata Electric Tramway Co., Ltd.)—The Kyushu Suiryoku Denki K.K. (Kyushu Hydro-Electric Power Co., Ltd.) is planning to establish a new subsidiary to take over the electric tramway business in Fukuoka City and vicinity. Properties to be transferred to the new company will probably include lines in Fukuoka City, Yoshizuka line and Jonan Line. The new company will be capitalized at Y.2,000,000, of which Y.500,000 will be called up.

**Showa Denryoku K.K.** (Showa Electric Power Co., Ltd.) The construction of the dam at the Shokawa No. 2 Power Station has been completed earlier than originally planned and trials are now being made. Construction which still remains includes only minor parts inside the station, also a transmission line of 197 miles between Yatsuo Substation and Shokawa by Daido Denryoku. These will be completed before the end of November.

Power to be generated of 45,000 k.w. will be supplied to Daido; transmission will probably be started by the end of this year.

**Construction of Changkiawan-Tehhwei Railway.**—Although the plans of the C.E.R. for the construction of the 30 li railway between Changkiawan and Tehhwei, Kirin province, were rejected by the government last year, prominent business men of Tehhwei have now convinced the local authorities of the necessity for the line. It is claimed that instead of inconvenient portage by road, a light railway for horse cars will be immensely profitable. With increased profits, steam traffic can eventually be used. In view of its value as a feeder it is learned that the G. E. R. is willing to supply both capital and material for construction.

**Soy Bean Casein, Japan.**—The process for manufacturing soy bean casein was discovered some seven years ago and the patent was bought from Sato, the discoverer, by the Sankyo Drug Co., of Tokyo, which started to manufacture casein, hoping to replace the imported milk casein used in Japan with soy bean casein. The cost of manufacture of this casein was too high to compete with imported milk casein and it was also found that soy bean casein absorbed moisture to a large extent and was not suited for Japan's climate. The largest users of casein in Japan are manufacturers of plywood and veneer. It was found that soy bean casein, when made into glue, lost its elasticity during damp weather. Professor Matsumoto has discovered a method of making soy bean casein and is using it in the manufacture of paracasein, which is a new venture, and according to the Department of Commerce it will be at least a year before it will be able to produce in appreciable quantities. There seems to be little competition between soy bean and milk casein unless manufacturing methods can be discovered which will overcome the disadvantages.

**Conservancy in North Manchuria.**—For the improvement of river traffic, Harbin authorities have created the North-eastern River Conservancy Bureau which will specially undertake the work of dredging the Sung Hwa River. A German engineer has been engaged to supervise the work.

**Wireless Telegraphy in Kwangtung.**—In view of the difficulty in sending messages through military wireless stations, the Kwangtung provincial authorities have erected a station near Shameen to be used exclusively for commercial purposes, maintaining a direct service from Canton to Hongkong.

**Roads for Kwangsi Province.**—The Kwangsi Department of Public Construction has mapped out four main roads with numerous branch roads, totalling some 7,000 li long, half of which have already been completed. Work is now being done on the 600 li road from Wuchow to Pinglo. One branch of this road goes from Hobsien to Fuchwan and connects with Yungming, Hunan province, while another branch joins Hsintu and Kwangning, Kwangtung province.

**Mukden and Paiyintala Connected.**—Direct passenger traffic and a mixed train service between Mukden and Paiyintala was inaugurated on June 20 via the Peking-Mukden Railway and the Tahushan-Tungliao Railway. The question of extending the Angangchi-Tsitsihar Railway is to be taken up shortly. Two thousand coolies have already been recruited for the work which comprises the construction of a viaduct across the Chinese Eastern Railway and a 21 mile track to Tsitsihar. Further extensions into to rich agricultural country of Nengkiang are contemplated.

**Flying Boats in Chekiang.**—Passenger service on the Chientang River, Chekiang Province, is speeding up. Another attempt is being made to cover the five-stage journey to Chuchow, in the space of eight hours. Three flying boats are in service, and are a cause of wonderment to people of the inland cities. The provinces of Kiangsi and Chekiang are at last being joined by a highway which will permit of motor traffic. The modernizing of this important gateway to the three provinces of Kiangsi, Chekiang and Fukien is an important step and will revolutionize trade connections with the coast.

**British Taxis for Hong Kong.**—It is not without interest to note that the standard form of British Light car is particularly adapted to dividend-earning purposes. Rootes, Ltd., of Devonshire House, Piccadilly, London, W.1, who have the sole world-exporting rights for this make, announce that they have recently supplied a fleet of 12/35 h.p. Clynos for use as taxi-cabs in Hong Kong. They are finished with the standard 56 in. track, and with specially designed body-work.

Hong Kong is to be congratulated upon having secured what must certainly be amongst the smartest and quickest public service vehicles in the world.

**Construction Work for Kwangtung, Kwangsi, Yunnan and Kweichow.**—As the development of the four south-western provinces depends on sound financial conditions and better communications, representatives of the Kwangtung, Kwangsi, Yunnan and Kweichow provincial governments recently drafted regulations for the organization of a bank to be known as the Industrial Development Bank of the four provinces, and decided on the installation of wireless stations in each province. A suitable location will be selected for the bank as soon as the project is approved by four provincial governments. As telegraphic communications have often been satisfactory it has been decided to use the military wireless stations in Kwangtung, Kwangsi and Yunnan provinces for commercial purposes, and as there is no wireless station in Kweichow, seven stations under the control of the Kwangtung army will be moved to Kweiyang so that wireless messages can be sent to Kwangsi and from there repeated to Kwangtung, Hupeh and Hunan provinces.



**Wireless for Shanhaikwan.**—Mukden authorities are making great strides in the installation of wireless stations. Those at Harbin, Changchun, Tsitsihar, Yingkow and Hulutao have either been completed or are nearing completion. An up-to-date wireless apparatus has just been bought for the Shanhaikwan station which will be installed in three weeks.

**Anta-Paichuan Railway.**—As the projected Anta-Paichuan branch of the Chinese Eastern Railway is in Heilungkiang province, the Central Government has notified the railway authorities that construction should be undertaken in conjunction with the Heilungkiang authorities. Russian and Chinese engineers have been detailed to make a survey and to report.

**Gas By-Product for Japanese Lawns.**—Ammonium sulphate, a by-product in the manufacture of gas, is being shipped by a gas company in St. Louis to Hawaii and Japan where it is used as a fertilizer, says the Pennsylvania Public Service Information Committee. This ammonium sulphate is a crystalline substance resembling white sand or salt, and is obtained by treating ammonia, a by-product of coal gas manufacture, with sulphuric acid.

It is being used extensively on lawns, golf courses and on fields in which food crops are grown, but where the soils are deficient in nitrogen. Recently, the company made one shipment of 336 tons of this ammonium sulphate to Yokohama.

Another gas company on the Pacific Coast is experimenting with the use of naphthalene for the control of insects in gardens. Naphthalene is another by-product of manufactured gas and is also used in the manufacture of moth balls. It has little fuel value and must be washed out of the gas before use, as it has a tendency to form deposits in gas mains which obstruct the flow of gas.

**The Tahushan-Tungliao Railway.**—The Tahushan-Tungliao Railway is a feeder of the Peking-Mukden line and taps country rich in cereals, live stock, skins and hides. The line begins at Tahushan, a station on the P.M.R., and terminates at Tungliao, both points being in South Manchuria. There are 16 intermediary stations, Haishan, Pataohao, Fangshanchen, Hsinlitun, Shihkiatze, Paotze, Kaokiatien, Changwu, Fengkiawupu, Changkutai, Aershiang, Kanchikai, Yihuta, Pahuta, Yamenying and Mulitu. Construction commenced in 1921 from Tahushan to Pataohao, a coal mining center, which was to be the terminus, but in 1925, in pursuance of the general policy of extending Chinese railways in Manchuria the line was extended to Hsinlitun, in 1926 to Changwu and in 1927 to Tungliao. Owing to lack of rolling stock and other causes the line at present is unable to cope with the traffic, there being thousands of tons of maize and *kaoliang* awaiting transport. Incoming cargo consists of piece goods and other foreign manufactures and outgoing is mainly agricultural products such as soybean, maize, *kaoliang* and millet. From November to May goods traffic is congested. Farm produce is marketed in November but there is always such an accumulation of stock that it takes the railways months to move it. From Kanchikai, Yihuta etc. of skins and live stock are exported. The line is 156 miles long and is connected with the Taonan-Anganki Railway. Through traffic between Tungliao and Newchwang, prior to the rise of Dairen the most important port in South Manchuria, was opened on March 15, this year.

The staple agricultural products of Tahushan and districts consist of *kaoliang*, abutilon and cotton. Local farm produce is carried to Tahushan to be railed to distant markets. According to the estimate of the local Chamber of Commerce about 50,000 piculs of *kaoliang* are exported yearly from Tahushan (picul=506 pounds), mostly to places in Chihli province. The current price for *kaoliang* per picul on the Tahushan market is \$300, *fengpiao*, small money. The *kaoliang* is polished by motor-operated mills, worked by current from the plant of the Pataohao Mining Company. Between 600,000-800,000 catties of abutilon is also exported to Suichung, Sinming and other South Manchuria districts at about \$7, silver, per picul. Five transportation companies are operating at Tahushan. *Kaoliang* exporters or buying agents who purchase through the transportation companies pay the latter a 10 per cent. commission. The local authorities levy a 1.1 *ad valorem* export duty on *kaoliang*, and the duty on abutilon is 2.75 per cent. The duty is paid by buyer and seller, equally in the case of *kaoliang* and entirely by the seller in the case of abutilon. Exchange between silver and *fengpiao* at the beginning of May was about 28 *fengpiao* to the dollar.

**Vladivostok Builds Piers.**—Plans have been made for the expenditure of about \$3,000,000 in the next five years in improving the port facilities at Vladivostok, Siberia, according to information reaching the American Mail Line from agents in that city.

The Chinese Eastern Railway is said to be encouraging shippers to export their goods *via* Vladivostok rather than by Southern trade routes. Some of the largest bean oil manufacturers in Dairen have already removed their headquarters to North Manchuria in anticipation of the new changes.

**Nippon Denryoku K.K. Plans to Absorb Fuji Denryoku.**—This company has just signed a merger contract with the Sobu Denryoku K.K. which has franchise districts in Kanagawa and Tokyo Prefectures, effecting a complete connection between the Tokyo Substation and the Odawara District. The districts covered by the former Odawara Electric Railway and Sobu are not so important as far as supplies are concerned, and this company is now anxious to absorb Fuji Denryoku (Fuji Electric Power Co.) which supplies power in Yokohama City for units of more than 100 h.p. and has supply rights in other districts in Kanagawa Prefecture. It is reported that merger negotiations are now going on.

**Investments in Rayon Industry.**—Since March this year the Showa Rayon and Nippon Woollens have started operation of their rayon mills, and other rayon companies have published their extension plans. This is considered remarkable in view of a depression prevailing in other industries.

The Teikoku Jinzo Kenshi K.K. (Imperial Rayon Co., Ltd.), the oldest rayon company in Japan, began the second part of extensions at its Iwakuni Mill in Yamaguchi Prefecture, to be completed before the end of this year. The Asahi Kenshoku K.K. (Asahi Silk Weaving Co., Ltd.), Another leading company in the industry, has decided to resume the construction plan of Nobeoka Mill in Miyazaki Prefecture, Kyushu. Mr. Uehata, managing director of the company, left for Germany in March to buy the necessary machinery. Construction will be started probably on his return in August, and new products are expected to come out in the market some time in the second half next year.

The Toyo Rayon and Nippon Rayon have begun their extension programs, the former to increase the present capacity to eight tons a day, the latter to six tons a day. It is reported that the Tokyo Jinzo Kenshi and Miye Jinzo Kenshi are also planning for extensions. The Kurashiki Kenshoku K.K., a subsidiary of the Kurashiki Boseki K.K., will be able to sell its products this fall. A summary of investments made by these eight companies is given as follows:

Company	Established		Authorized Capital Yen	Paid in Capital Yen
Teikoku Jinzo Kenshi	June, 1918	.. ..	21,000,000	21,000,000
Asahi Kenshoku	May, 1922	.. ..	8,000,000	6,000,000
Nippon Rayon	March, 1926	.. ..	15,000,000	6,000,000
Toyo Rayon	February, 1926	.. ..	10,000,000	10,000,000
Tokyo Jinzo Kenshi	March, 1926	.. ..	10,000,000	2,500,000
Miye Jinzo Kenshi	January, 1924	.. ..	1,000,000	454,000
Showa Rayon	March, 1928	.. ..	12,000,000	5,000,000
Kurashiki Kenshoku	January, 1926	.. ..	10,000,000	2,500,000
Total			87,000,000	53,454,000

which compare with the total authorized capital of cotton spinning companies of Y.464,000,000 the end of 1927, of raw silk companies of about Y.300,000,000. Considering the short history of the industry, this development is remarkable. At the end of January 1921 the total capital amounted to only Y.5,500,000, while the increase during the last eight years is 16 times that amount. Adding debentures of Teikoku amounting to Y.10,000,000, those of Asahi Y.3,000,000, investments other than capital of Toyo Rayon Y.5,000,000, Y.2,500,000 invested in rayon equipment by Nippon Woollens, Y.1,000,000 of Maruwa Orimono, Y.125,000 of Jinken Kogyo K.K., total investments in the rayon industry amount to Y.75,079,000. Extension costs are estimated at Y.5,000,000 Teikoku, Y.10,000,000 Asahi, Y.7,000,000 Nippon Rayon, Y.5,000,000 Toyo Rayon, Y.500,000 each Tokyo Jinzo Kenshi and Miye Jinzo Kenshi, total Y.28,000,000. These funds will be raised either by calling up capital, increasing capital or debenture issue. Under the circumstances, the total investment may amount to more than Y.100 million before the end of this year.



**Armory Turned into Factory.**—The Political Committee has decided to use the old buildings of the Heng Chang Armory in Changsha, Hunan province, for the Min Sen factory, producing goods for poor people.

**Long Distance Telephone for Kwangtung.**—General Chen Chi-tang has decided to install a long distance telephone between Canton, Kwangtung province, with branch station at Shiuhing and Wuchow, Kwangsi province.

**Pottery Works Re-opened.**—Since the suspension of operations last winter by the pottery works in Liling, Hunan province, workers in this trade have suffered greatly. \$5,000 have been appropriated by the local authorities to re-open the works.

**Limchow-Shiuchow Road.**—The Department of Construction of Kwangtung province is preparing to build the 220 li road from Limchow to Shiuchow, passing Yuyuan, in order to increase transportation facilities between Kwangtung, Kwangsi and Hunan provinces. A special construction bureau has been organized with Wang Ching-yu as its head and the magistrates of the three *hsiens* as assistants.

**New Silk Filatures for Wushi.**—The filature industry in Wushi, a well-known raw silk producing center of Kiangsu province, is growing very prosperous. Most of the filatures are making handsome profits, as their product always finds a ready market in foreign countries. In 1921 there were nine filatures in the city, with a total of 2,532 reels, but the number has now increased to 21, with a total of over 5,000 reels. This Spring four new filatures were established, each equipped with over 200 reels.

**Through Traffic for North China Railways.**—Although the long interrupted Peking-Hankow Railway has resumed traffic, Pukow trains will have to pass along the Lung-Hai Railway to come to Peking owing to the damage to the great bridge over the Yellow River near Tsinanfu. The Director of the Railway Department of the Nationalist Government is now arranging through traffic for trains from Pukow via the Lung-Hai Railway from Hsuechow, to Chengchow and thence by the Peking-Hankow Railway to Peking.

**Kirin-Hailung Railway.**—Work on the Kirin-Hailung Railway is making rapid progress. All the necessary materials were transported by the Mukden-Hailung Railway last winter. The Kou Shan, Chang Kang and Yen Tung Shan tunnels have been completed. The Lao Yeh Shan tunnel will be finished in a few days, and all the bridges will be finished in two months. On the completion of the bridges rails will be laid from Chaoyangchen to Kirin, and it is expected that traffic between Hailung and Yen Tung Shan will begin in October and be extended to Kirin by the end of the year.

**New Roads in China.**—Since the completion of the Northern Expedition, definite measures have been taken by various provinces for reconstruction, especially the building of roads and highways. Reports from Nanchang states that the Provincial Finance Department of Kiangsi has decided to appropriate \$100,000 per month beginning from August for the construction of six main highways in the province: (1) the Kiangsi-Chekiang Highway, (2) the Kiangsi-Kwangtung Highway, (3) the Kiangsi-Hunan Highway, (4) the Kiangsi-Hupeh Highway, (5) the Kiangsi-Anhwei Highway, and (6) the Kiangsi-Fukien Highway.

The Reconstruction Department of the Anhwei Provincial Government has also decided to repair and complete the following four trunk roadways in the Province: the Wuhu-Tunki, the Anking-Szechow, the Anking-Ningkwu, and the Shucheng-Pochow Highways. It is estimated that the total mileage of the four trunk roads will be 2,590 li (860 miles).

The program set out by the Highway Department of the Chekiang Provincial Government calls for the construction of the Hangchow-Changhwa and the Hangchow-Hweichow Highways. The roads connecting Shaohing and Ningpo, and Ningpo and Fenghua are now under construction and will be completed in the fall. Various motor roads are also being constructed in and around Hangchow.—*Kuo Min News Agency.*

**Sub-Stations Equipments.**—Railway electrification in Australia is still proceeding and additional electrical equipment for sub-stations has been ordered from the British Thomson-Houston Co., Ltd., Rugby. This plant is required in connection with the Sydney Suburban Electrification scheme of the New South Wales Government Railways, and includes B.T.H. transformers, rotary converters, and automatic starting equipments. The transformers will reduce the E.H.T. bulk power supply, in some cases from 33,000 volts and in others from 11,000 volts, to a voltage which applied to the rotary converters will enable these machines to feed the track at 1,500 volts. There will be 16 single phase transformers, each rated at 1,100 k.v.a., and ten 1,500 kw. 750 volt rotary converters, which will be connected two in series so as to give 1,500 volts. B.T.H. rotary converter plant aggregating 45,000 kw. is already installed in connection with the Sydney Suburban Railway Electrification scheme, so that when the equipment just ordered is installed the total will be 60,000 kw.

Among other orders of interest received by the British Thomson-Houston Company is one from the Calcutta Electric Supply Company, India, for a 2,500 kw. 6,000/450 to 500 volt motor-converter with suitable starting equipment, and one for the complete electrical equipment for 15 sub-stations, through which electricity for domestic and industrial purposes will be provided in Colombo, Ceylon. There is already an electrical supply in Colombo, but a re-organization and large extension of the area in which electric power is available is taking place, and the plant which the British Thomson-Houston Company is now called on to supply includes 20 three-phase, 50 cycle transformers, each of 100 k.v.a. rating, 3 of 280 k.v.a. 3 of 500 k.v.a. and one of 750 k.v.a., also 3 rotary converters of 250 kw. each, and a 667 k.v.a. frequency changer to give a single-phase, 60 cycle supply.

**Chinese Cotton Mill Statistics.**—The following China cotton mill statistics for the latter half of 1927 have been compiled by the Chinese Cotton Millowners' Association of Shanghai as per returns received:—

(1) *Number of Spinning Spindles:—*

	On December 31, 1927.	On June 30, 1927.	On December 31, 1926.	On July 31, 1926.	On January 31, 1926.
Spindles in operation ..	2,932,889	3,135,330	2,307,634	2,066,996	2,031,212
Spindles in course of erection ..	25,820	5,800	7,600	13,112	2,000

(It is estimated that there exist in the whole country about 3,500,000 spinning spindles).

(2) *Quantity of Cotton Consumed:—*  
(in bales of 500 lbs.)

	Half Year Ending.				
	December 31, 1927.	June 30, 1927.	December 31, 1926.	July 31, 1926.	January 31, 1926.
Chinese cotton ..	409,410	498,363	421,567	426,762	361,859
American cotton ..	139,399	153,391	76,217	57,573	27,893
East Indian cotton ..	99,557	172,465	173,472	172,175	161,477
Egyptian cotton ..	504	308	367	180	285
Sundries ..	184	1,135	447	260	70
Total ..	649,054	825,662	672,070	656,950	551,584

(3) *Cotton Mill Stocks:—*  
(in bales of 500 lbs.)

	On January 1, 1928.	On July 1, 1927.	On January 1, 1927.	On August 1, 1926.	On February 1, 1926.
Chinese cotton ..	149,146	86,138	102,727	131,996	100,953
American cotton ..	44,030	61,481	33,846	26,834	18,810
East Indian cotton ..	22,730	73,155	47,002	129,406	41,068
Egyptian cotton ..	357	545	190	70	80
Sundries ..	80	1,124	49	180	11
Total ..	216,343	222,443	183,814	288,486	160,922

(4) *Short-Time:—*

	Half Year Ending.				
	December 31, 1927.	June 30, 1927.	December 31, 1926.	July 31, 1926.	January 31, 1926.
Number of spindles stopped ..	1,538,640	1,130,982	900,501	1,180,243	702,137
Average number of hours stopped ..	1,630	1,281	1,128	790	1,166
Number of weeks during which the spindles from which returns have been received were stopped ..	6.50	3.50	3.33	3.40	3.05



**Round Yokohama Electric Railway.**—A new electric railway to run around the City of Yokohama is being planned by Mr. Ryosaku Kume of Tokyo and 12 other promoters. The company will be known as the Yokohama Junkan Denki Tetsudo K.K. (Round Yokohama Electric Railway Co., Ltd.), to be capitalized at Y.3,500,000. The projected line will start from the New Yokohama Station and terminate at Isogo Machi, via Hodogaya Machi, Kusaka Mura and O-oka Mura, 4 miles 72 chains, double track. The necessary license has been applied for already.

**Electric Power for Irrigation at Foochow.**—Foochow farmers irrigate their farms by a primitive device which is totally inadequate in dry seasons. Thus the success or failure of the crops depends largely upon weather conditions. To remedy this the Agriculture and Labor Department of the Fukien Provincial Government is contemplating using water falls to obtain electric power to supply to the farmers for pumping. To carry out the plan, a loan of \$3,000,000, known as the Water Power Loan, is being issued. The loan bonds are to be accepted at par by Fukien officials in payment of the deposit which is required from Fukien native banks to cover their note-issue. The loan is to bear 8 per cent. interest, will be redeemable in eleven years and is to be secured on the assets and receipts of the projected power plant.

**Kurobegawa Suiryoku Denki:** (Kurobegawa Hydro-Electric Power Co., Ltd.).—This company has completed a total of 16,000 k.w. recently and is now planning to construction of another power station with a rated capacity of 9,000 k.w., located at Shimoyama Mura, on the lower part of Kurobe River. Principal machinery to be installed at this new station includes three units of 4,000 h.p. water turbines, and three units of 3,000 k.w. vertical type generators, to be automatically operated.

This station has an effective head of 40 feet, with a water flow of 1,800 cubic feet a second. On completion, power to be generated will be supplied to the Ome Mill of the Denki Kagaku Kogyo K.K. (Electro-Chemical Industry Co., Ltd.). The company expects to complete the construction before the end of this year.

**Nippon Semento K.K.** (Nippon Cement Co., Ltd.).—Creditors of this company have agreed to the adjustment plans proposed by Asano Cement which has taken over the management of the company. The office staff and workmen have been decreased about one half and operation of mills was started on April 8.

Capital of Y.5,000,000 is to be reduced to Y.1,250,000; loans amounting to Y.3,000,000 to be converted into shares, making the total capital Y.4,250,000 paid in. The balance of obligations amounting to some Y.400,000 are to be paid back in installments. Of the debentures of Y.3,500,000, Y.1,000,000 will be due in November this year, Y.2,500,000 in 1931.

The present capacity of this company is 125,000 barrels a month, including 45,000 barrels at the Yatsushiro Mill, 80,000 barrels Saiki Mill. According to the production limitation agreement, actual production will be less, some 90,000 barrels a month.

The equipment of Yatsushiro Mill is rather out of date, with naturally low efficiency. Asano will improve it at an estimated cost of Y.300,000 to 400,000.

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# SULZER

## SHANGHAI ENGINEERING OFFICE

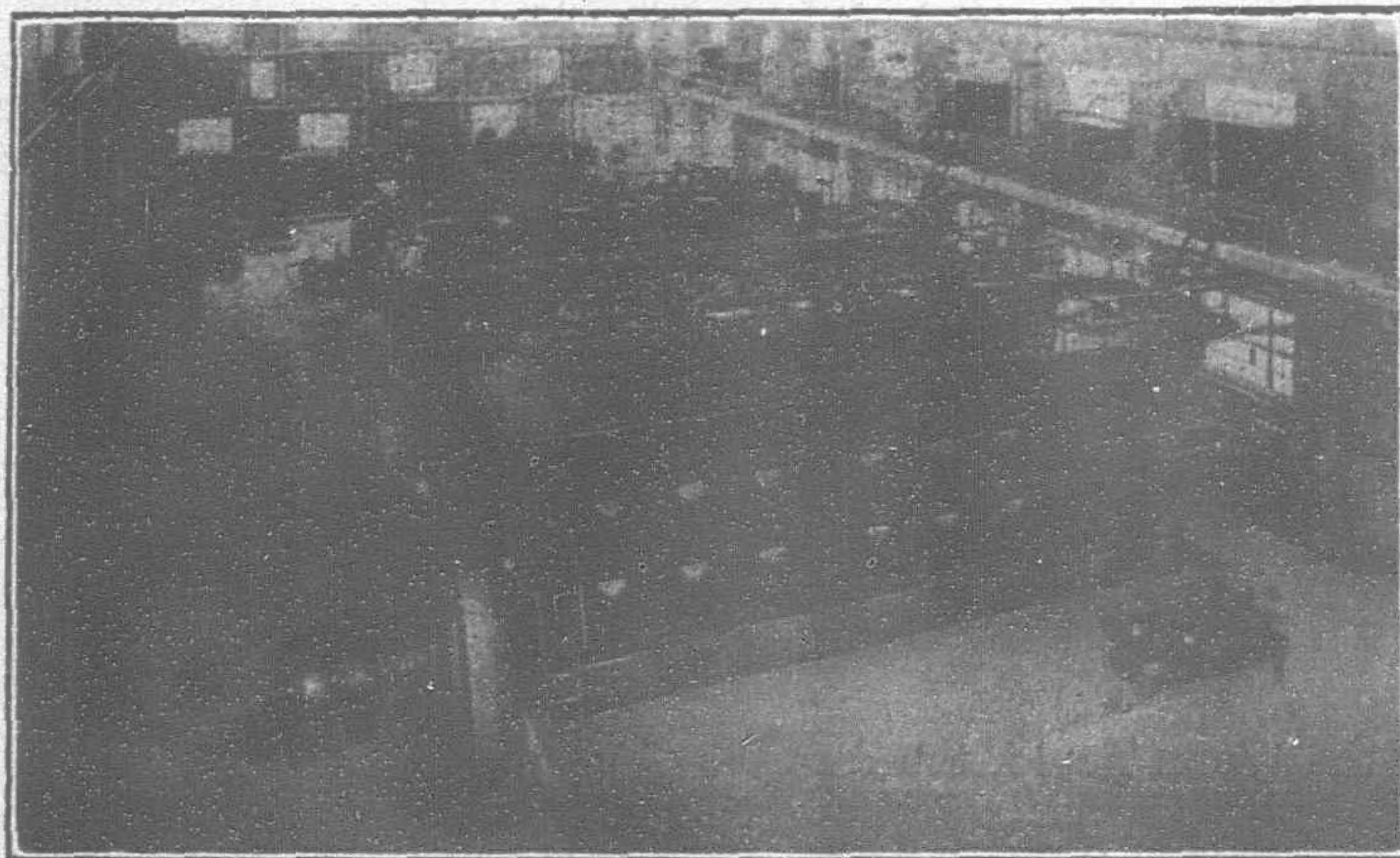
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2 × 1,500 B.H.P. = 3,000 B.H.P.  
2 × 3,600 B.H.P. = 7,200 B.H.P.  
1 × 4,800 B.H.P. = 4,800 B.H.P.

Total ... 15,000 B.H.P.

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